Docket No. 200403959-1

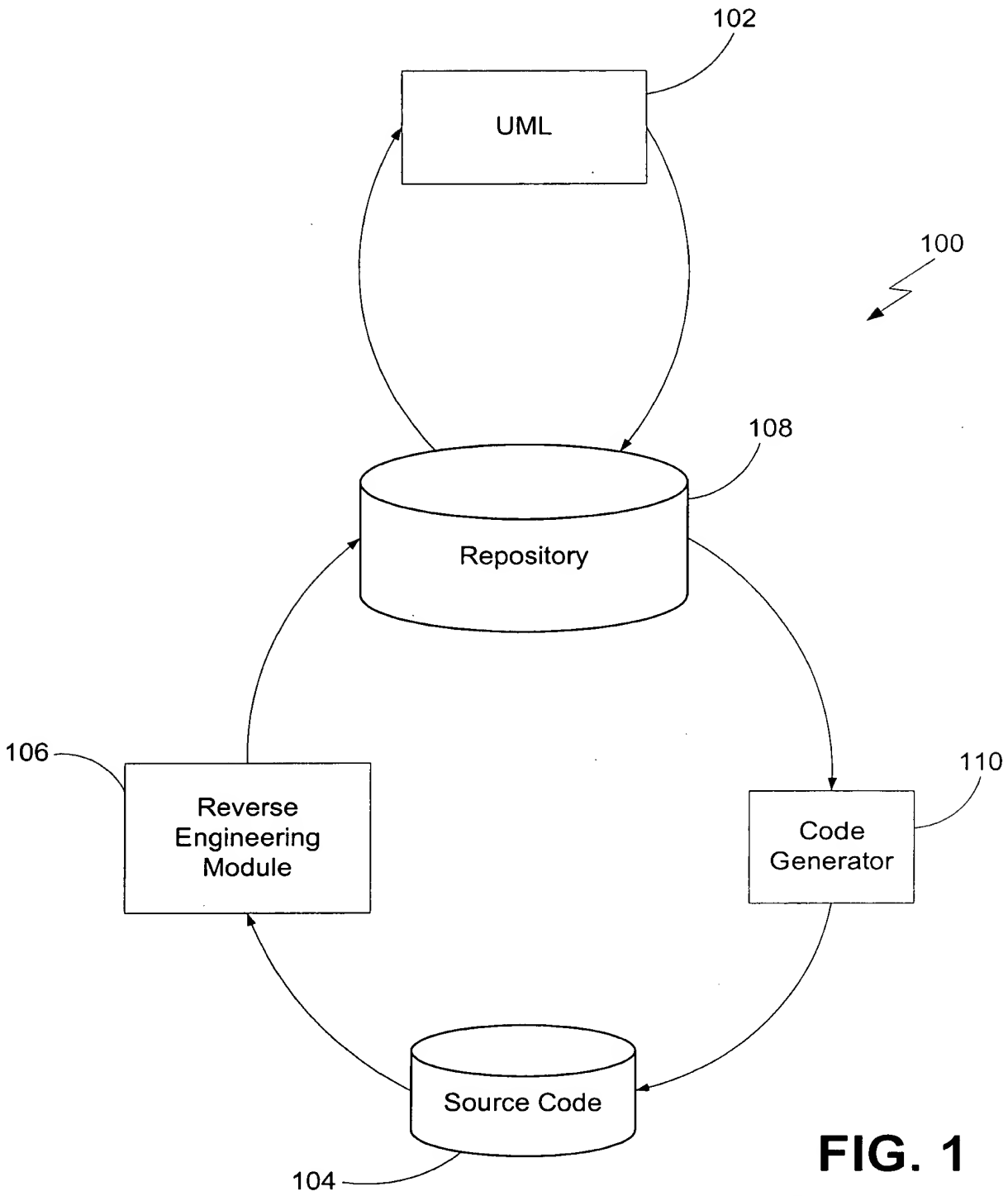


FIG. 1
(Prior Art)

Docket No. 50325-1501

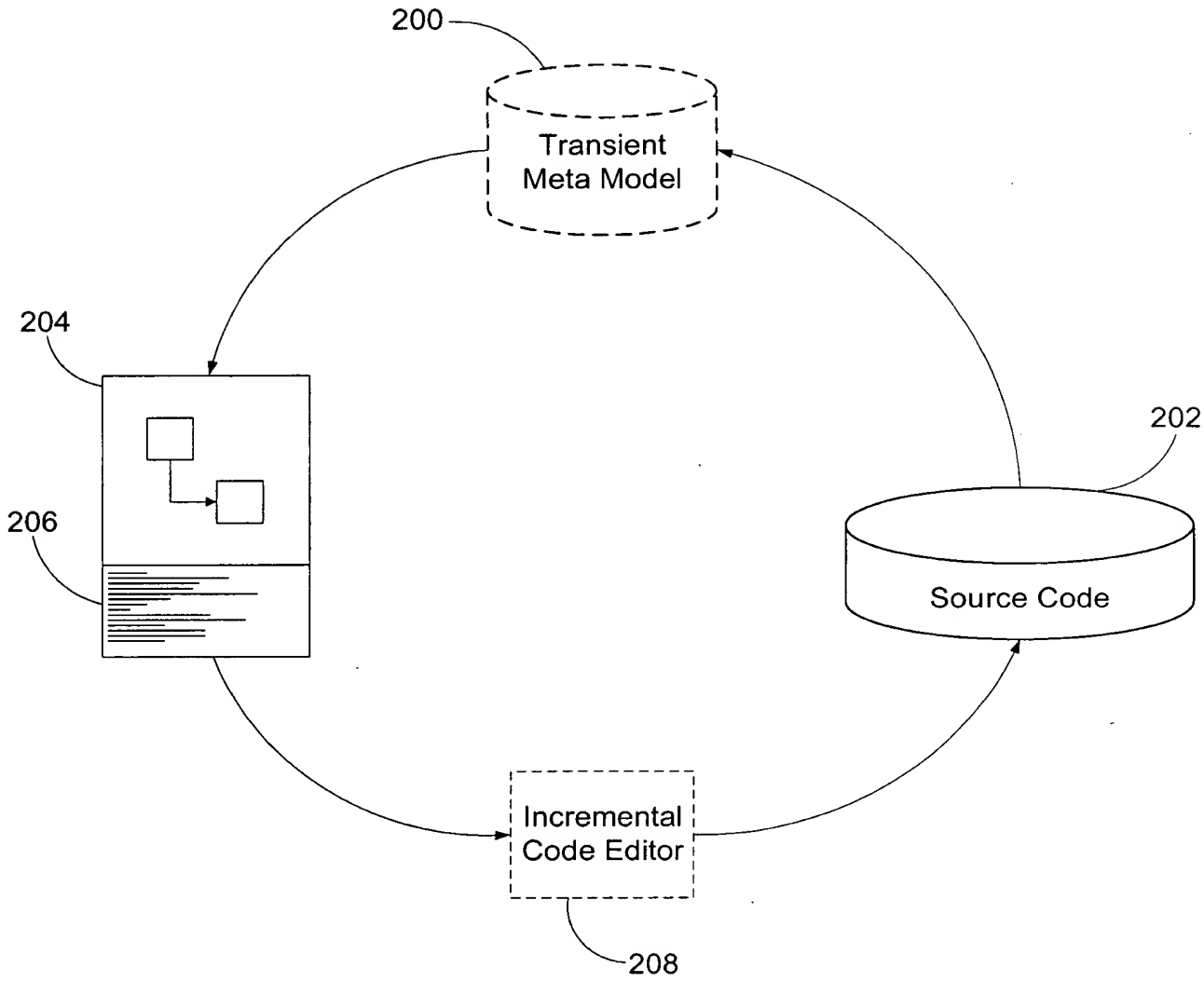


FIG. 2

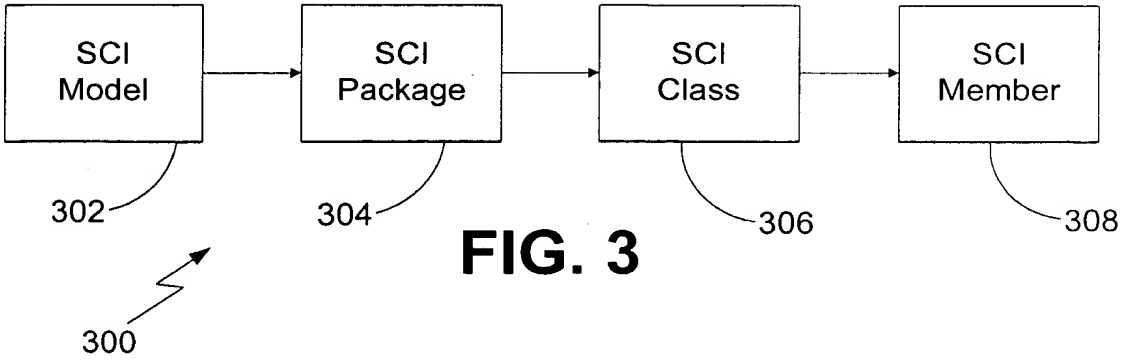


FIG. 3

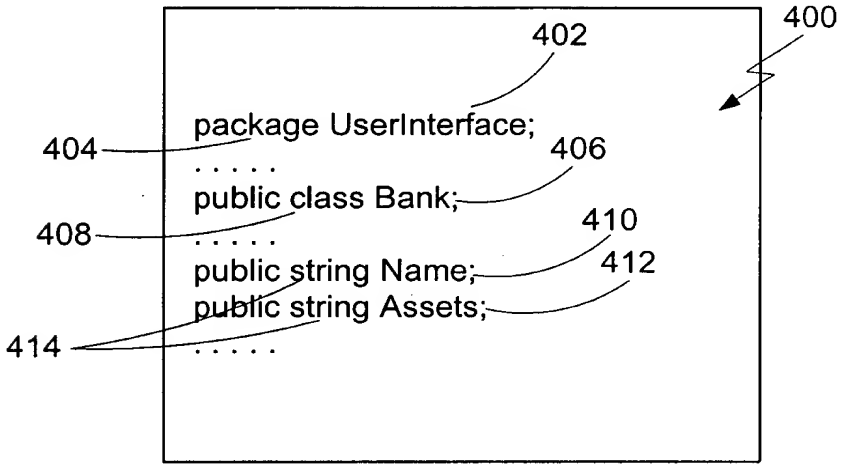


FIG. 4

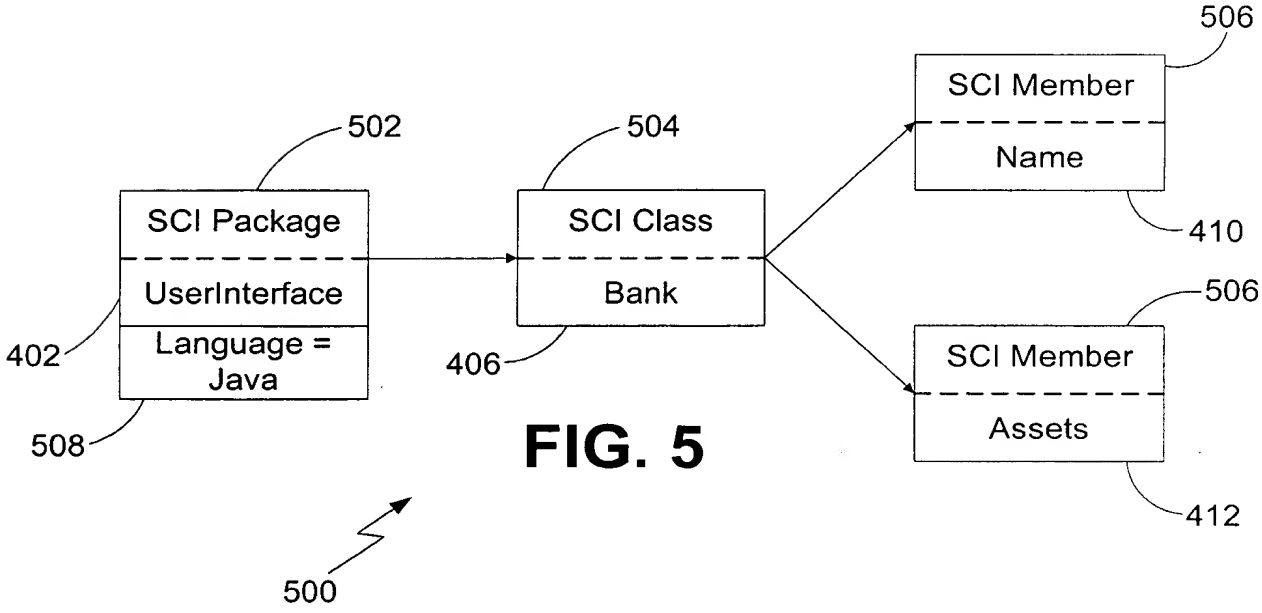


FIG. 5

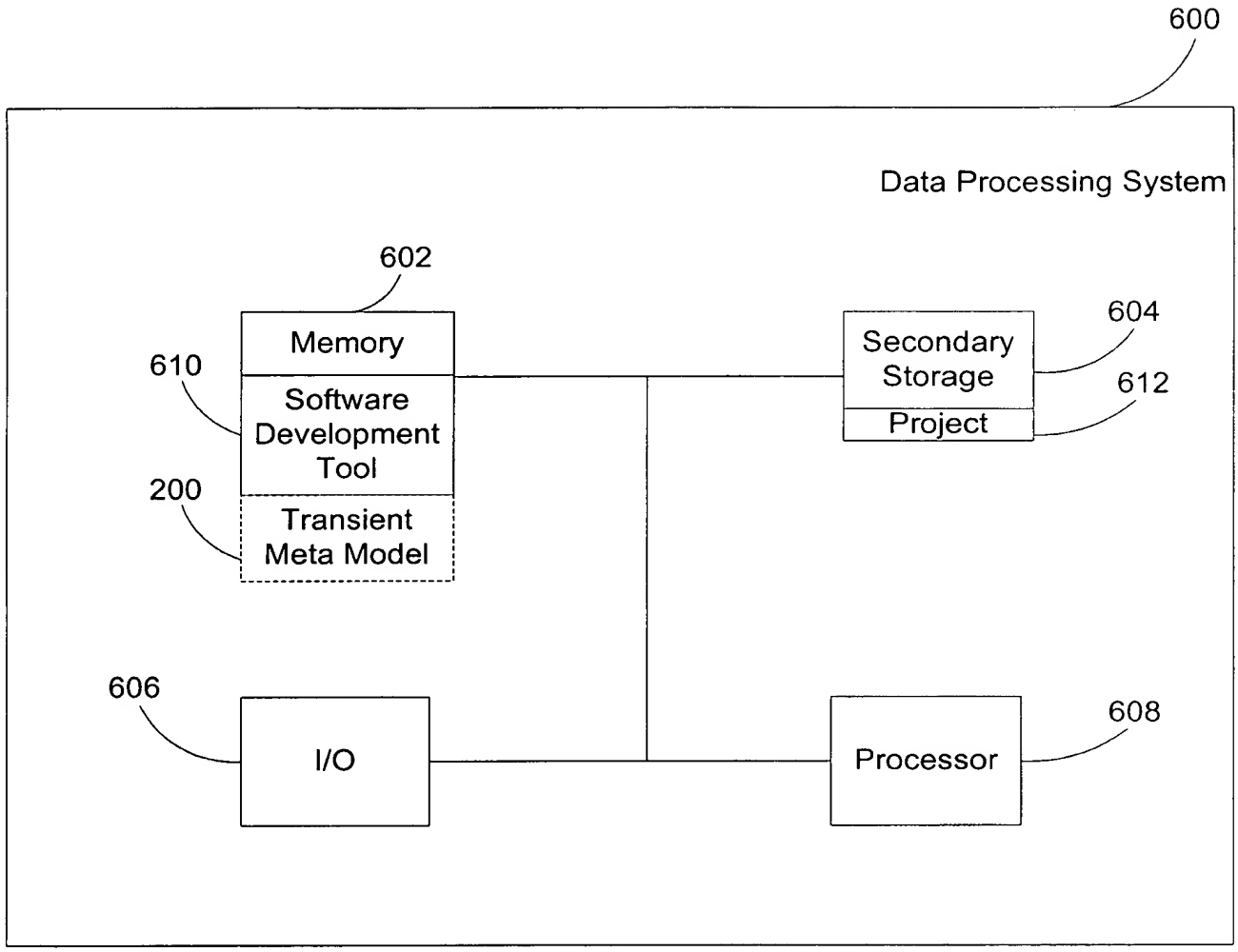

600
Data Processing System
602
Memory
610
Software Development Tool
200
Transient Meta Model
604
Secondary Storage
612
Project
606
I/O
608
Processor

FIG. 6

Petitioner's Exhibit 1002
Page 45 of 58

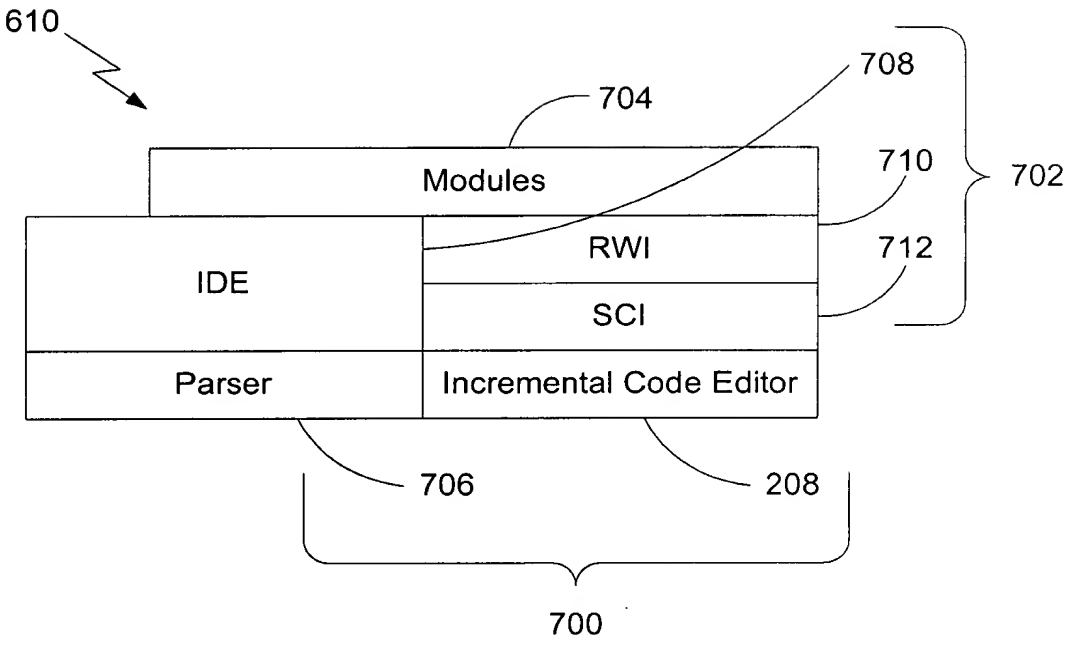


FIG. 7

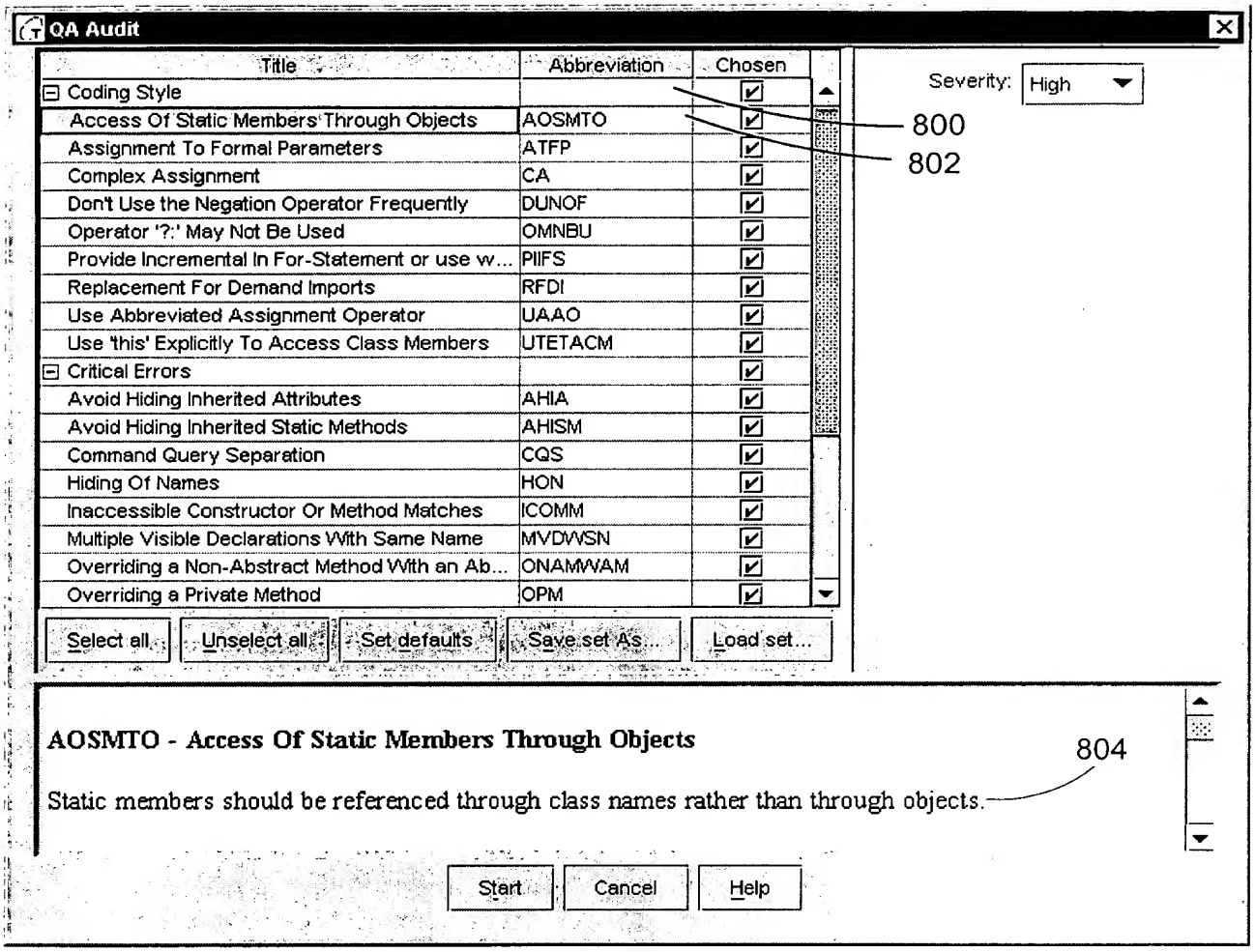

QA Audit
Title
Abbreviation
Chosen
Severity:
High
Coding Style
Access Of Static Members Through Objects
AOSMTO
Assignment To Formal Parameters
ATFP
Complex Assignment
CA
Don't Use the Negation Operator Frequently
DUNOF
Operator '?:' May Not Be Used
OMNBU
Provide Incremental In For-Statement or use w...
PIIFS
Replacement For Demand Imports
RFDI
Use Abbreviated Assignment Operator
UAAO
Use 'this' Explicitly To Access Class Members
UTETACM
Critical Errors
Avoid Hiding Inherited Attributes
AHIA
Avoid Hiding Inherited Static Methods
AHISM
Command Query Separation
CQS
Hiding Of Names
HON
Inaccessible Constructor Or Method Matches
ICOMM
Multiple Visible Declarations With Same Name
MVDWSN
Overriding a Non-Abstract Method With an Ab...
ONAMWAM
Overriding a Private Method
OPM
800
802
Select all
Unselect all
Set defaults
Save set As...
Load set...
AOSMTO - Access Of Static Members Through Objects
804
Static members should be referenced through class names rather than through objects.
Start
Cancel
Help

FIG. 8A

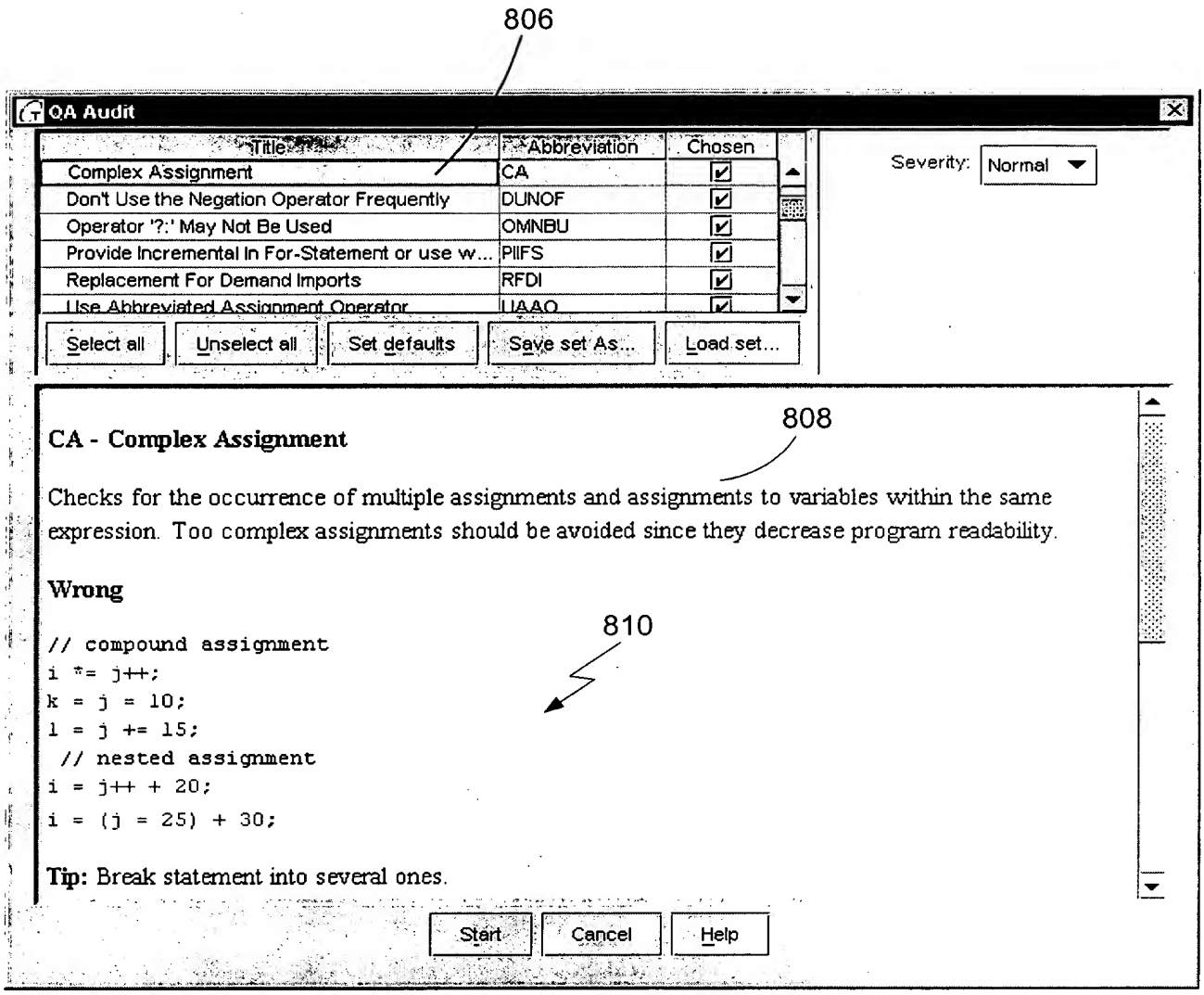

806
QA Audit
Title
Abbreviation
Chosen
Complex Assignment
CA
Don't Use the Negation Operator Frequently
DUNOF
Operator '?:' May Not Be Used
OMNBU
Provide Incremental In For-Statement or use w...
PIIFS
Replacement For Demand Imports
RFDI
Use Abbreviated Assignment Operator
UAAO
Severity:
Normal
Select all
Unselect all
Set defaults
Save set As...
Load set...
808
CA - Complex Assignment
Checks for the occurrence of multiple assignments and assignments to variables within the same expression. Too complex assignments should be avoided since they decrease program readability.
Wrong
810
// compound assignment
i *= j++;
k = j = 10;
l = j += 15;
// nested assignment
i = j++ + 20;
i = (j = 25) + 30;
Tip: Break statement into several ones.
Start
Cancel
Help

FIG. 8B

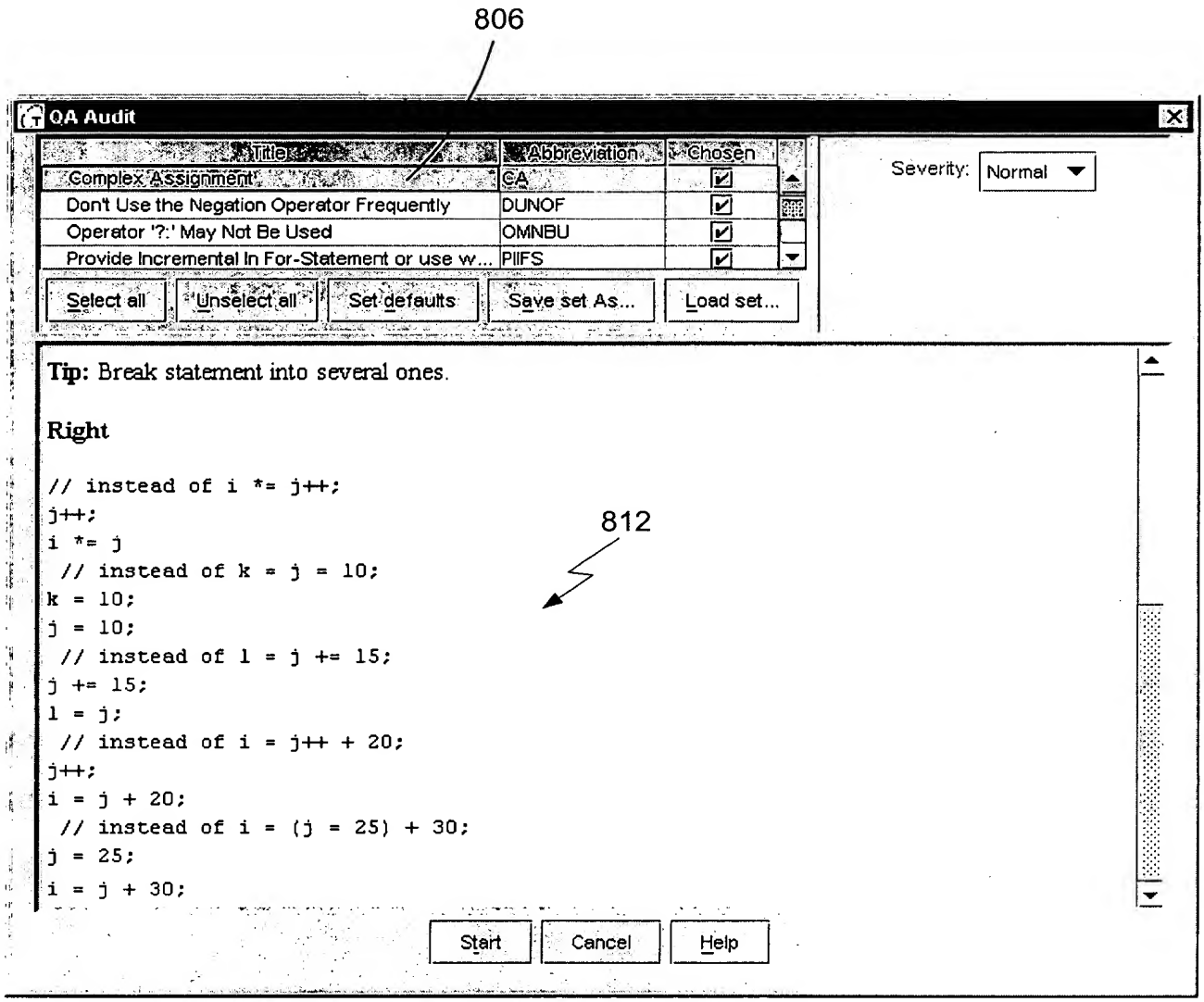

806
QA Audit
Title
Abbreviation
Chosen
Complex Assignment
CA
Don't Use the Negation Operator Frequently
DUNOF
Operator '?:' May Not Be Used
OMNBU
Provide Incremental In For-Statement or use w...
PIIFS
Severity:
Normal
Select all
Unselect all
Set defaults
Save set As...
Load set...
Tip: Break statement into several ones.
Right
// instead of i *= j++;
j++;
i *= j
// instead of k = j = 10;
k = 10;
j = 10;
// instead of l = j += 15;
j += 15;
l = j;
// instead of i = j++ + 20;
j++;
i = j + 20;
// instead of i = (j = 25) + 30;
j = 25;
i = j + 30;
812
Start
Cancel
Help

FIG. 8C

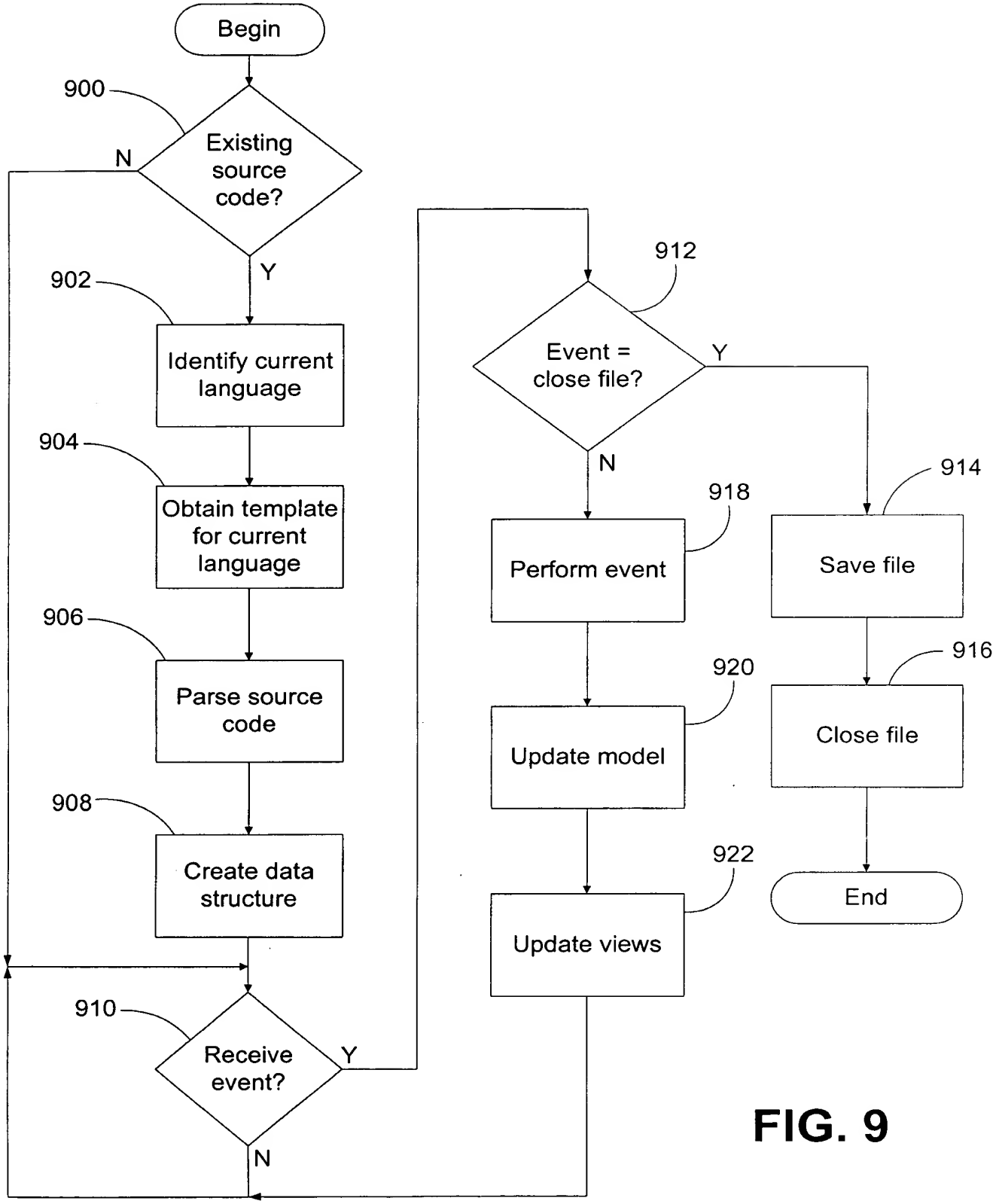

Begin
900
Existing source code?
N
Y
902
Identify current language
904
Obtain template for current language
906
Parse source code
908
Create data structure
910
Receive event?
Y
N
912
Event = close file?
Y
N
914
Save file
916
Close file
End
918
Perform event
920
Update model
922
Update views

FIG. 9

Docket No. 50277-0501

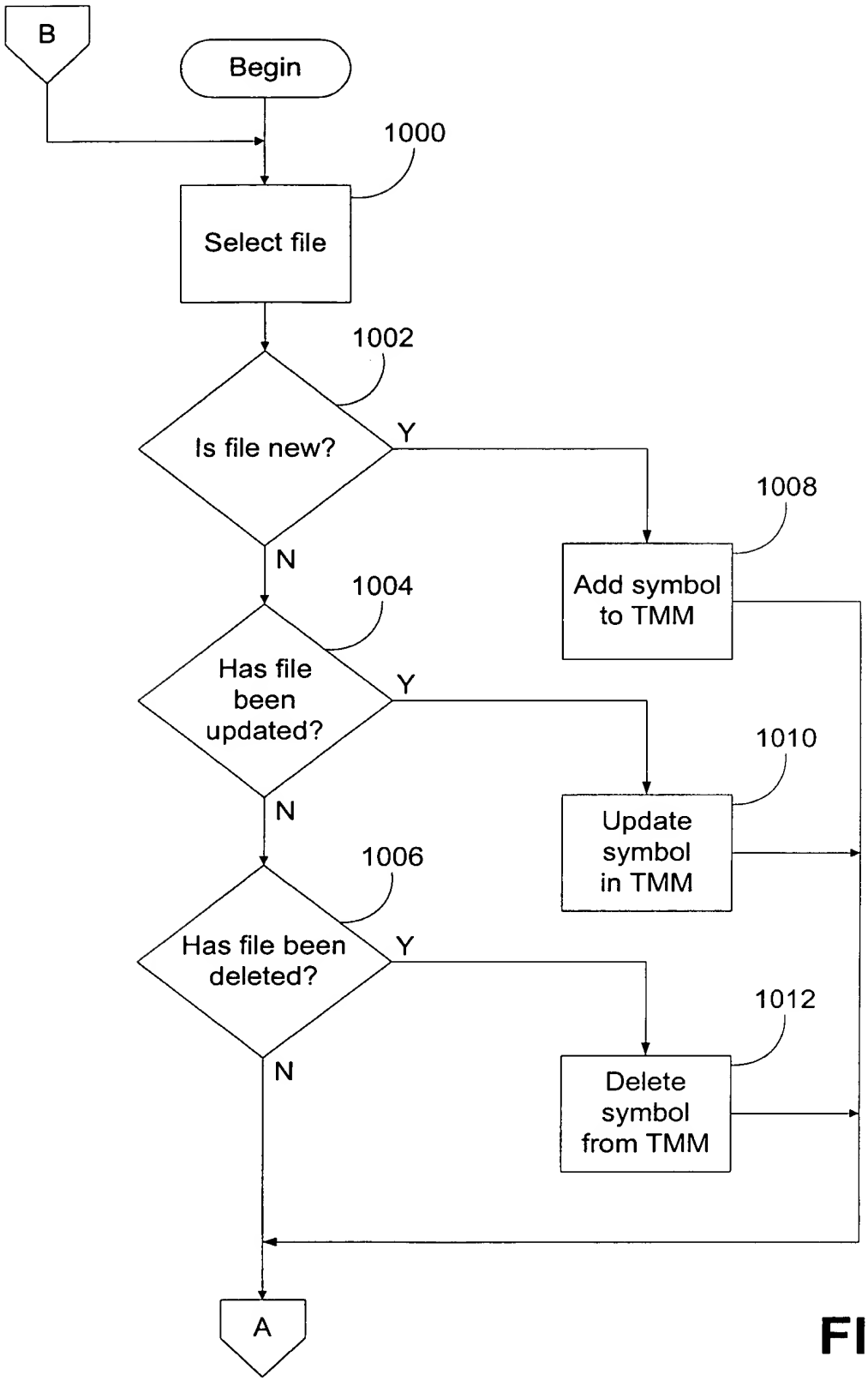


FIG. 10A

Docket: 2003-0524

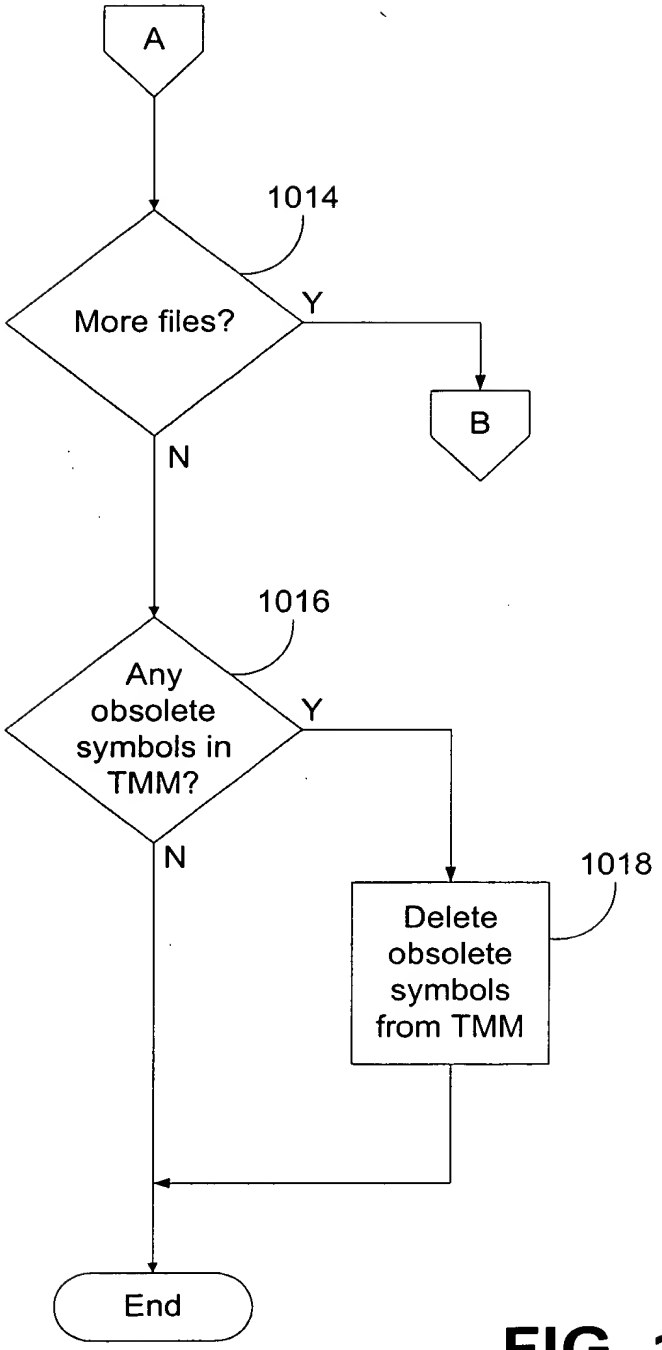


FIG. 10B

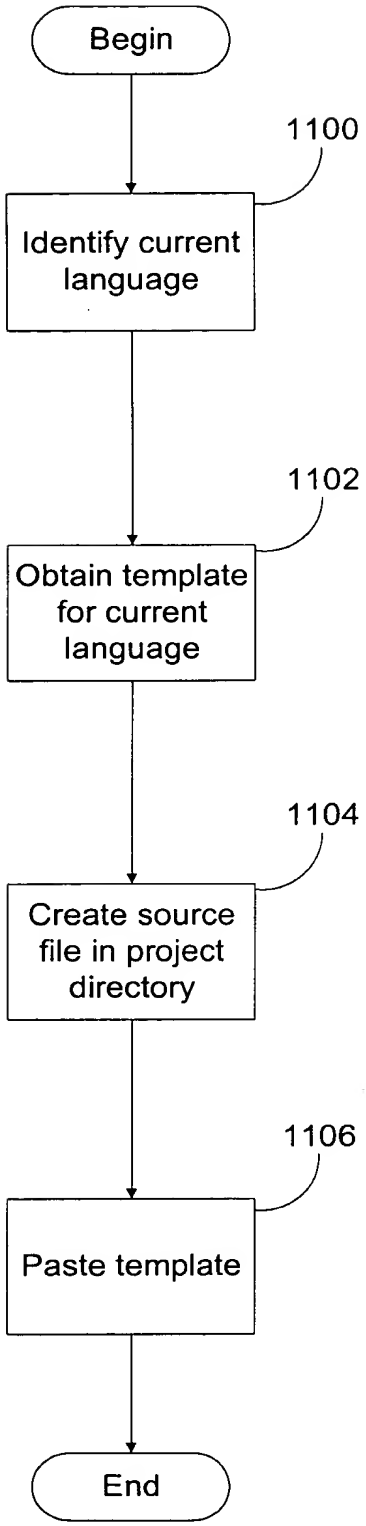


FIG. 11

Docket No. 50277-0001

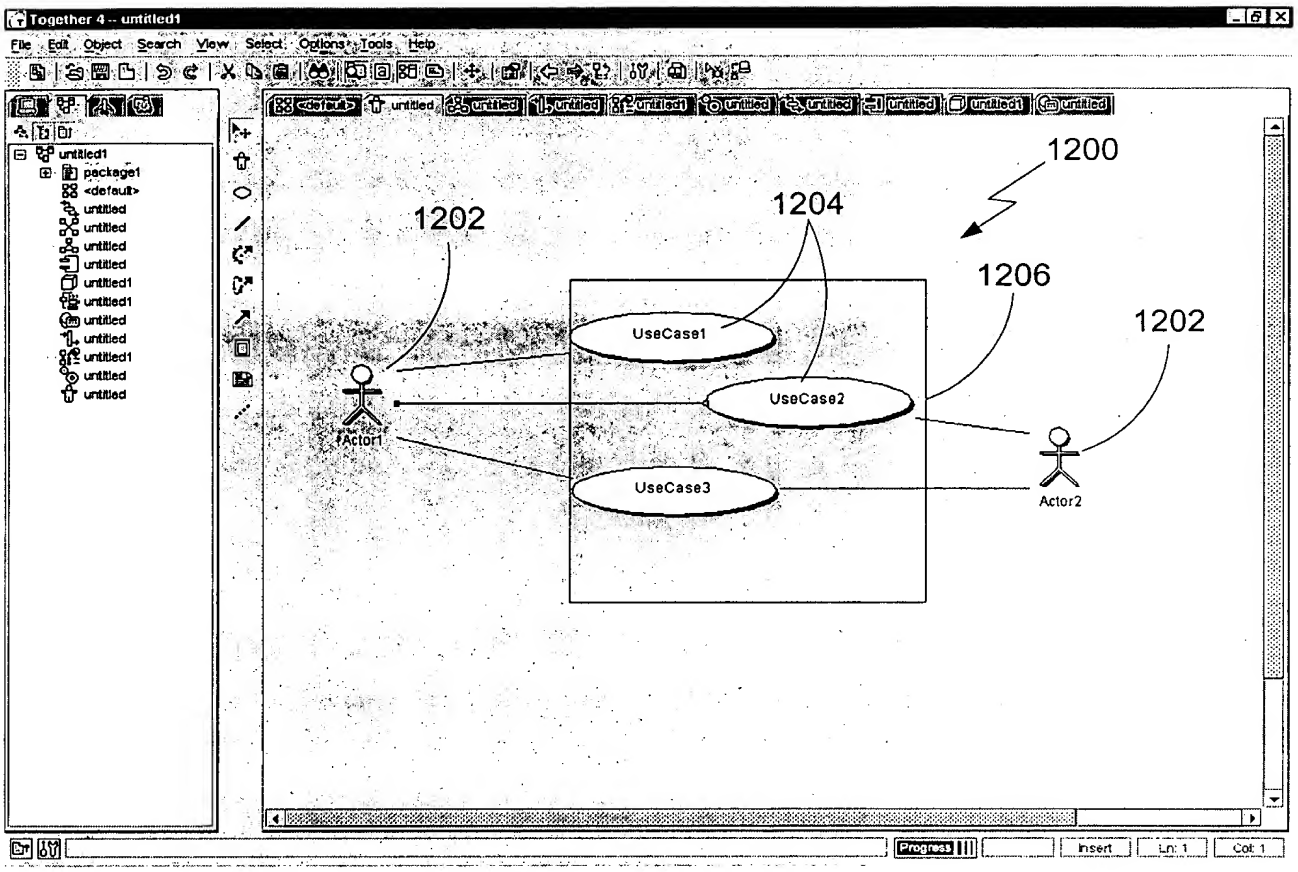

Together 4 -- untitled1
File Edit Object Search View Select Options Tools Help
untitled1
package1
<default>
untitled
untitled1
1200
1202
1204
1206
1202
UseCase1
UseCase2
UseCase3
Actor1
Actor2
Insert
Ln: 1
Col: 1

FIG. 12

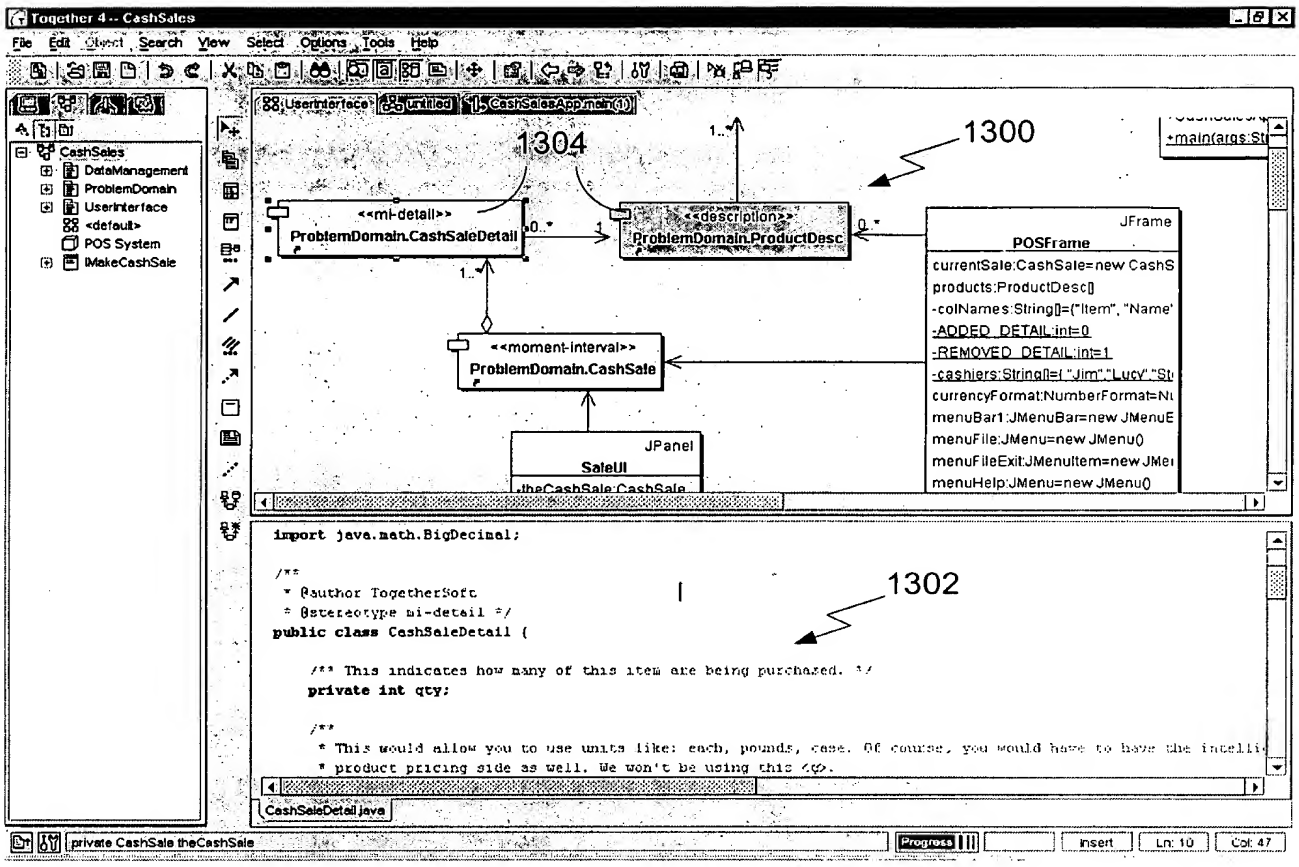

Together 4 -- CashSales
File Edit Project Search View Select Options Tools Help
CashSales
DataManagement
ProblemDomain
UserInterface
<default>
POS System
IMakeCashSale
UserInterface
untitled
CashSalesApp.main(1)
1304
1300
<<mi-detail>>
ProblemDomain.CashSaleDetail
<<description>>
ProblemDomain.ProductDesc
JFrame
POSFrame
currentSale:CashSale=new CashS
products:ProductDesc[]
-colNames:String[]={"Item", "Name"
-ADDED_DETAIL:int=0
-REMOVED_DETAIL:int=1
-cashiers:String[]={"Jim","Lucy","St
currencyFormat:NumberFormat=Nu
menuBar1:JMenuBar=new JMenuE
menuFile:JMenu=new JMenu()
menuFileExit:JMenuItem=new JMe
menuHelp:JMenu=new JMenu()
<<moment-interval>>
ProblemDomain.CashSale
JPanel
SaleUI
theCashSale:CashSale
+main(args:St
import java.math.BigDecimal;
/**
* @author TogetherSoft
* @stereotype mi-detail */
public class CashSaleDetail {
/** This indicates how many of this item are being purchased. */
private int qty;
/**
* This would allow you to use units like: each, pounds, case. Of course, you would have to have the intelli
* product pricing side as well. We won't be using this <g>.
1302
CashSaleDetail.java
private CashSale theCashSale
Progress
Insert
Ln: 10
Col: 47

FIG. 13

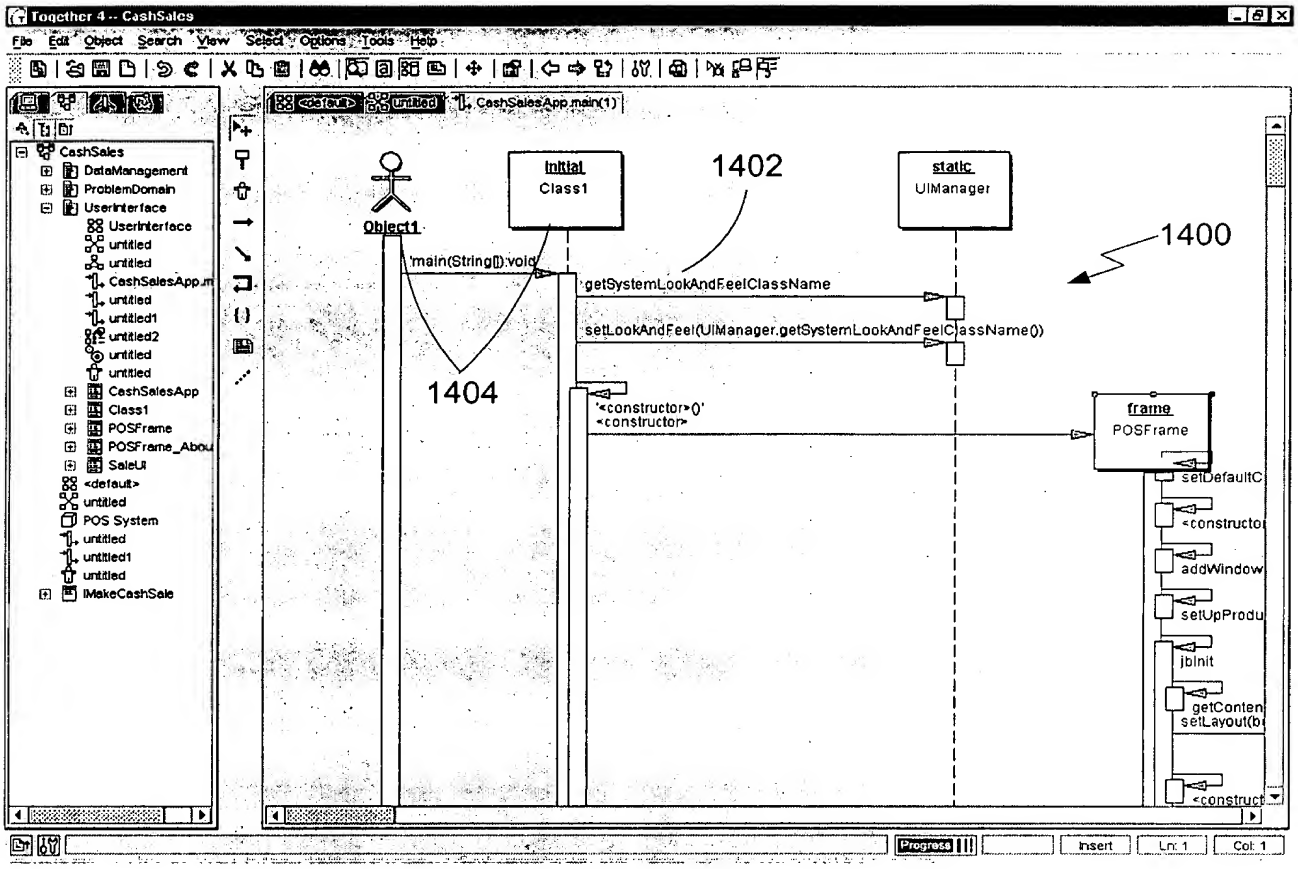

Together 4 -- CashSales
File Edit Object Search View Select Options Tools Help
CashSales
DataManagement
ProblemDomain
UserInterface
UserInterface
untitled
untitled
CashSalesApp.m
untitled
untitled1
untitled2
untitled
untitled
CashSalesApp
Class1
POSFrame
POSFrame_Abou
SaleUI
<default>
untitled
POS System
untitled
untitled1
untitled
IMakeCashSale
<default>
untitled
CashSalesApp.main(1)
Object1
Initial
Class1
1402
static
UIManager
1400
'main(String[]):void'
getSystemLookAndFeelClassName
setLookAndFeel(UIManager.getSystemLookAndFeelClassName())
1404
'<constructor>()'
<constructor>
frame
POSFrame
setDefaultC
<constructo
addWindow
setUpProdu
jbInit
getConten
setLayout(b
<construct
Progress
Insert
Ln: 1
Col: 1

FIG. 14

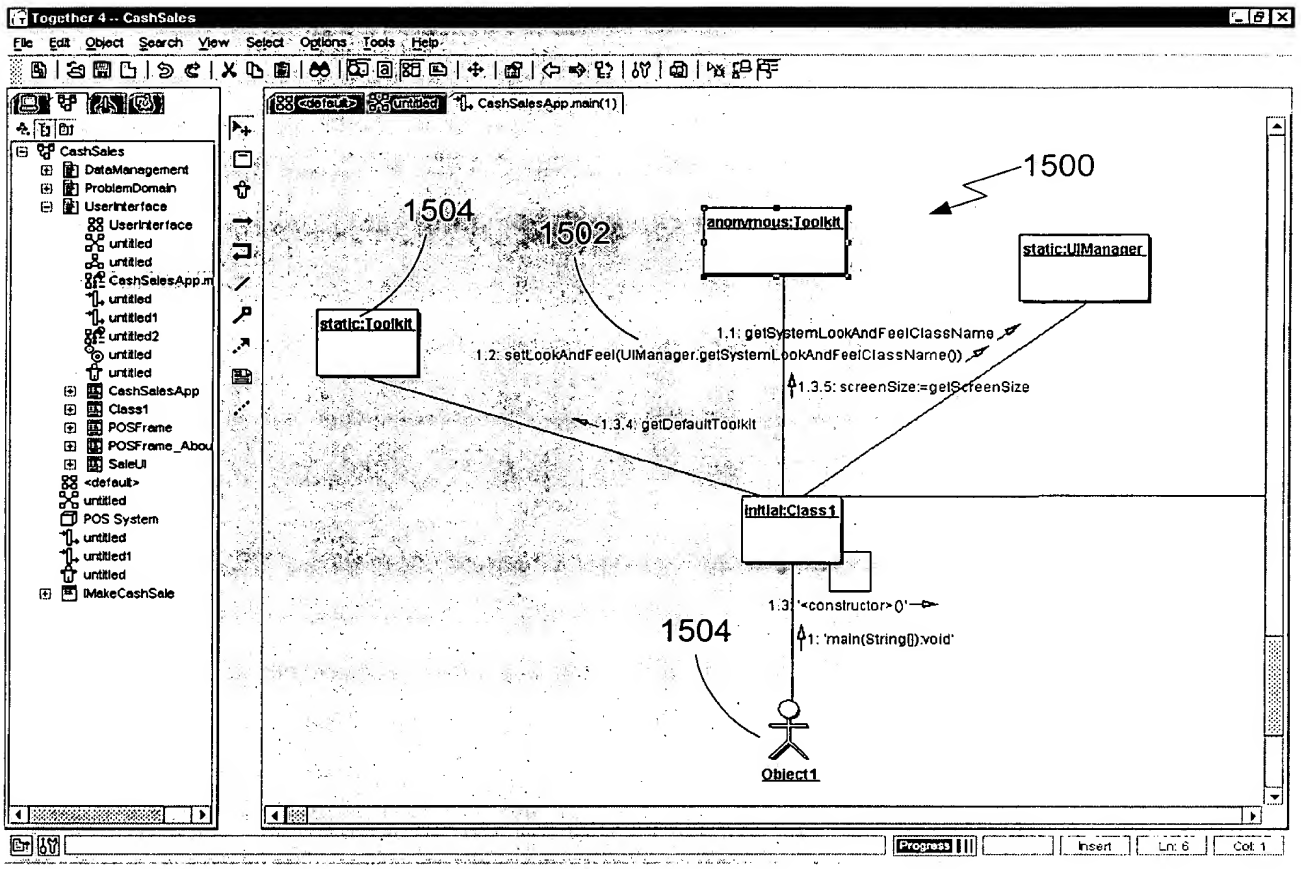

Together 4 -- CashSales
File Edit Object Search View Select Options Tools Help
CashSales
DataManagement
ProblemDomain
UserInterface
UserInterface
untitled
untitled
CashSalesApp.m
untitled
untitled1
untitled2
untitled
untitled
CashSalesApp
Class1
POSFrame
POSFrame_Abou
SaleUI
<default>
untitled
POS System
untitled
untitled1
untitled
IMakeCashSale
<default>
untitled
CashSalesApp.main(1)
1500
1504
1502
anonymous:Toolkit
static:UIManager
static:Toolkit
1.1: getSystemLookAndFeelClassName
1.2: setLookAndFeel(UIManager.getSystemLookAndFeelClassName())
1.3.5: screenSize:=getScreenSize
1.3.4: getDefaultToolkit
initial:Class1
1.3: '<constructor>()'
1: 'main(String[]):void'
1504
Object1
Progress
Insert
Ln: 6
Col: 1

FIG. 15

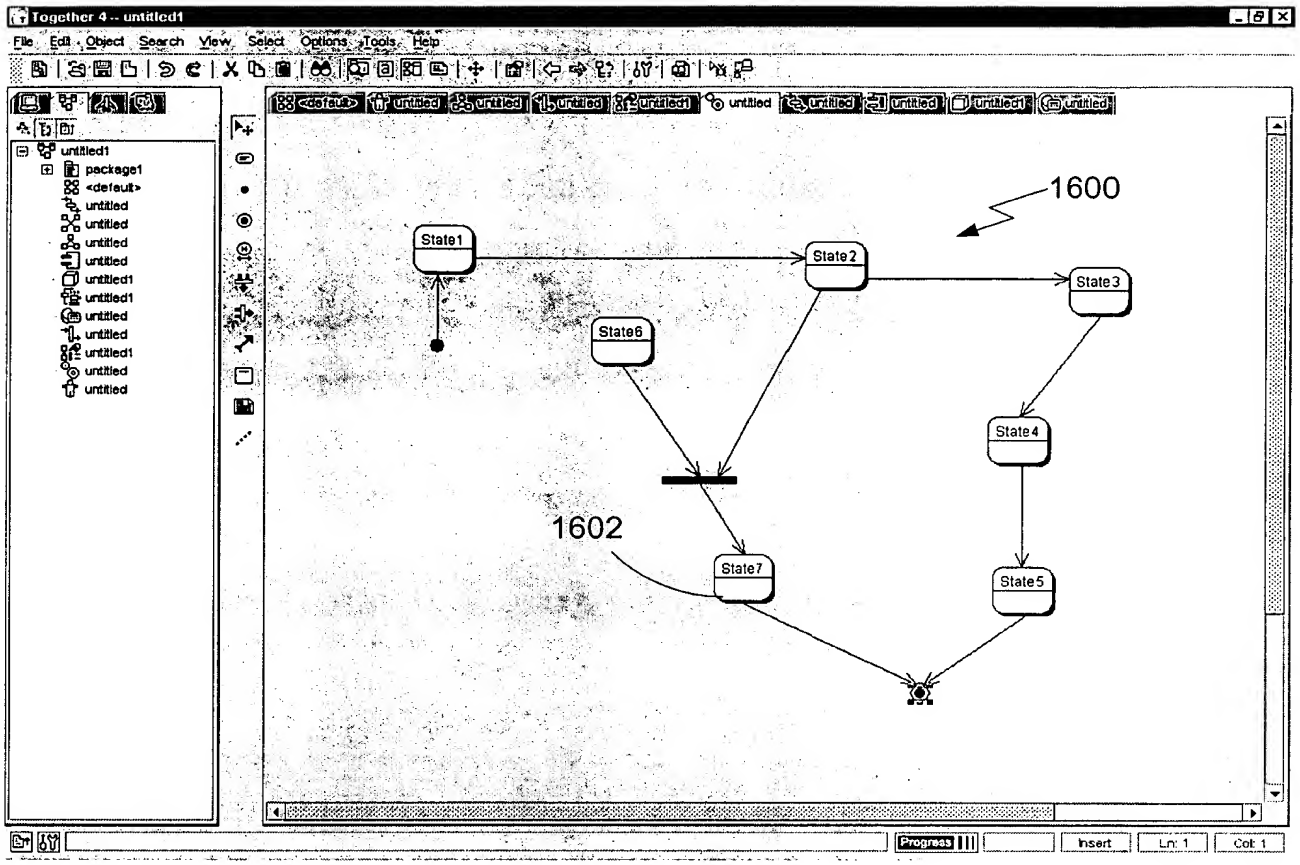

Together 4 -- untitled1
File Edit Object Search View Select Options Tools Help
untitled1
package1
<default>
untitled
untitled1
untitled
untitled
untitled
untitled
untitled
untitled1
1600
State1
State2
State3
State4
State5
State6
State7
1602
Progress
Insert
Ln: 1
Col: 1

FIG. 16

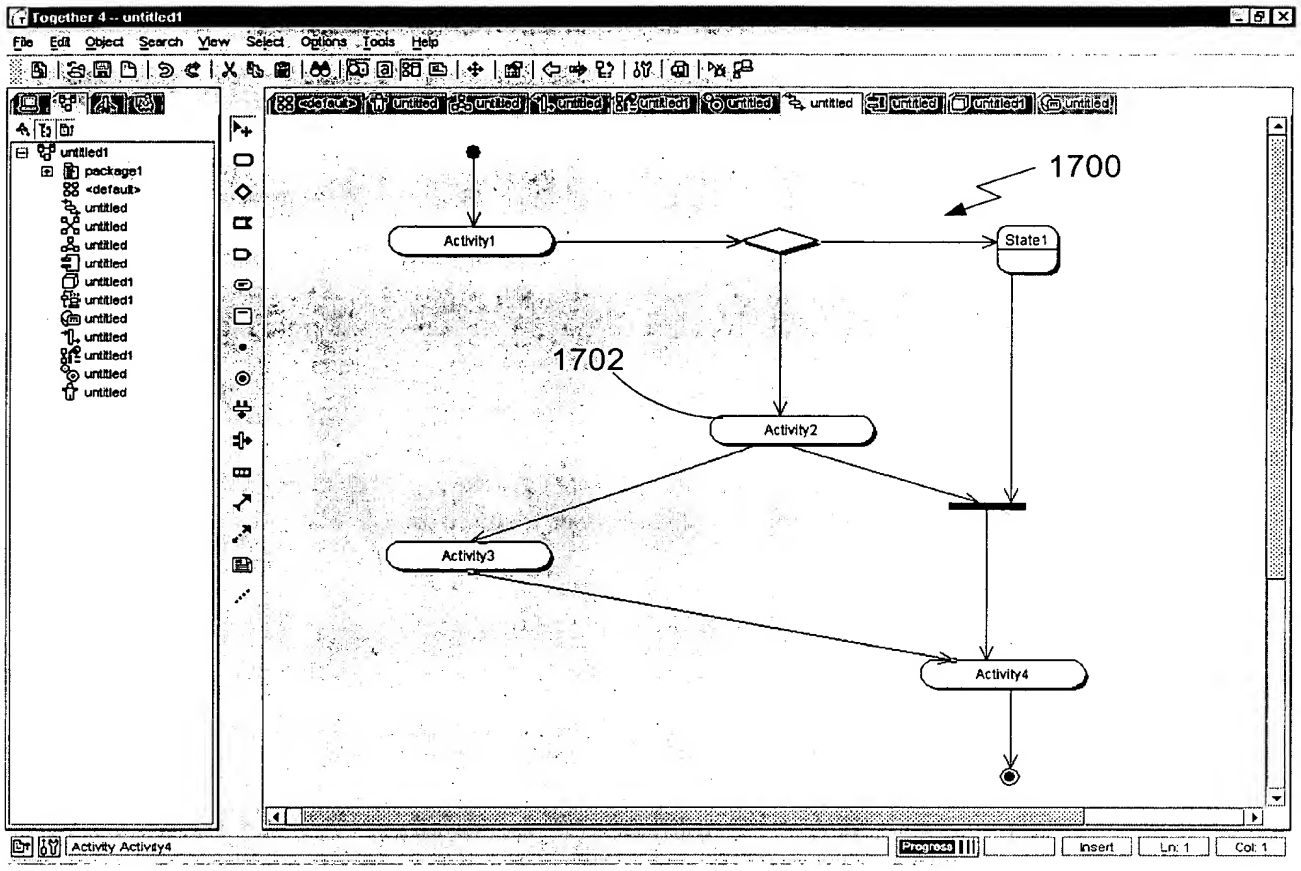

Together 4 -- untitled1
File Edit Object Search View Select Options Tools Help
untitled1
package1
<default>
1700
Activity1
State1
1702
Activity2
Activity3
Activity4
Activity Activity4
Progress
Insert
Ln: 1
Col: 1

FIG. 17

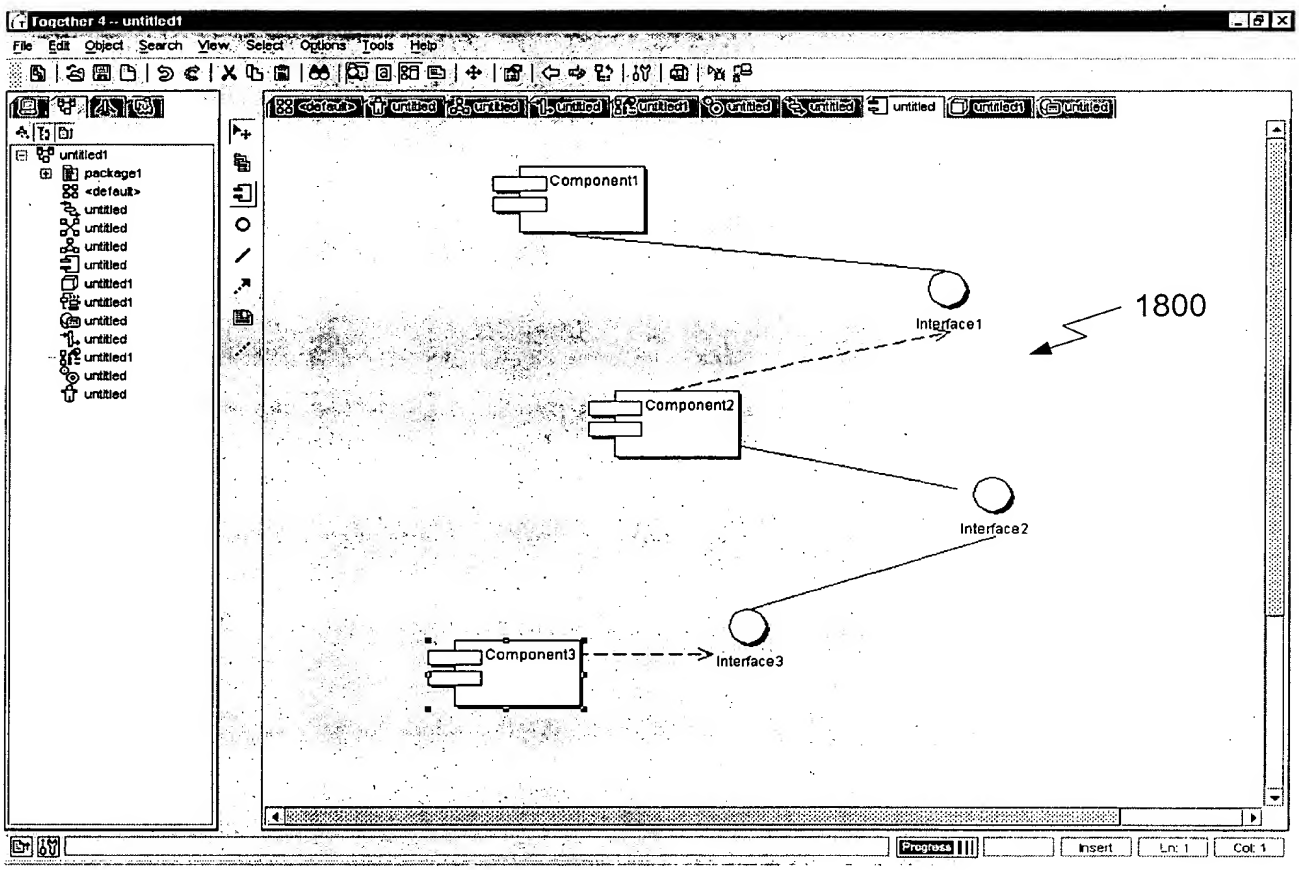

Together 4 -- untitled1
File Edit Object Search View Select Options Tools Help
untitled1
package1
<default>
untitled
untitled1
Component1
Interface1
1800
Component2
Interface2
Component3
Interface3
Progress
Insert
Ln: 1
Col: 1

FIG. 18

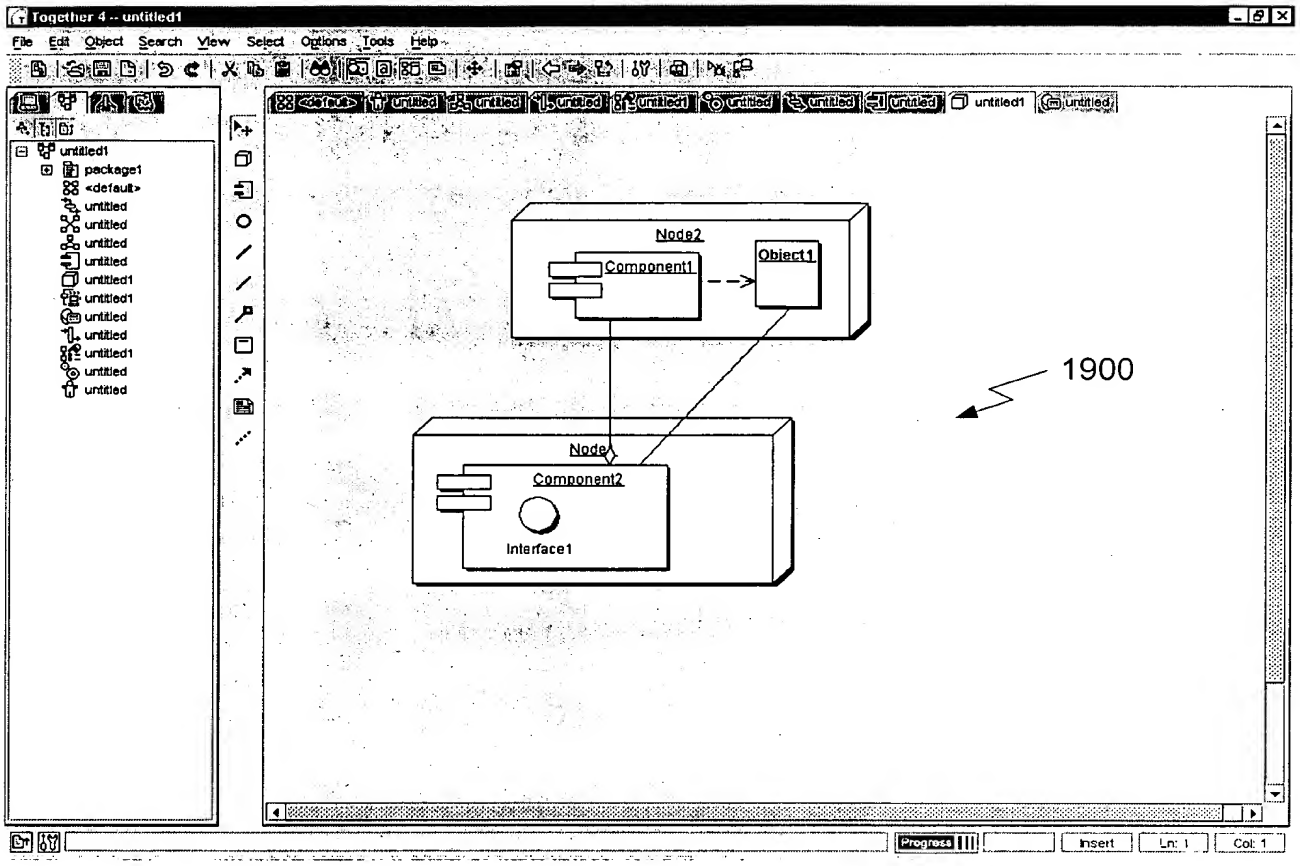
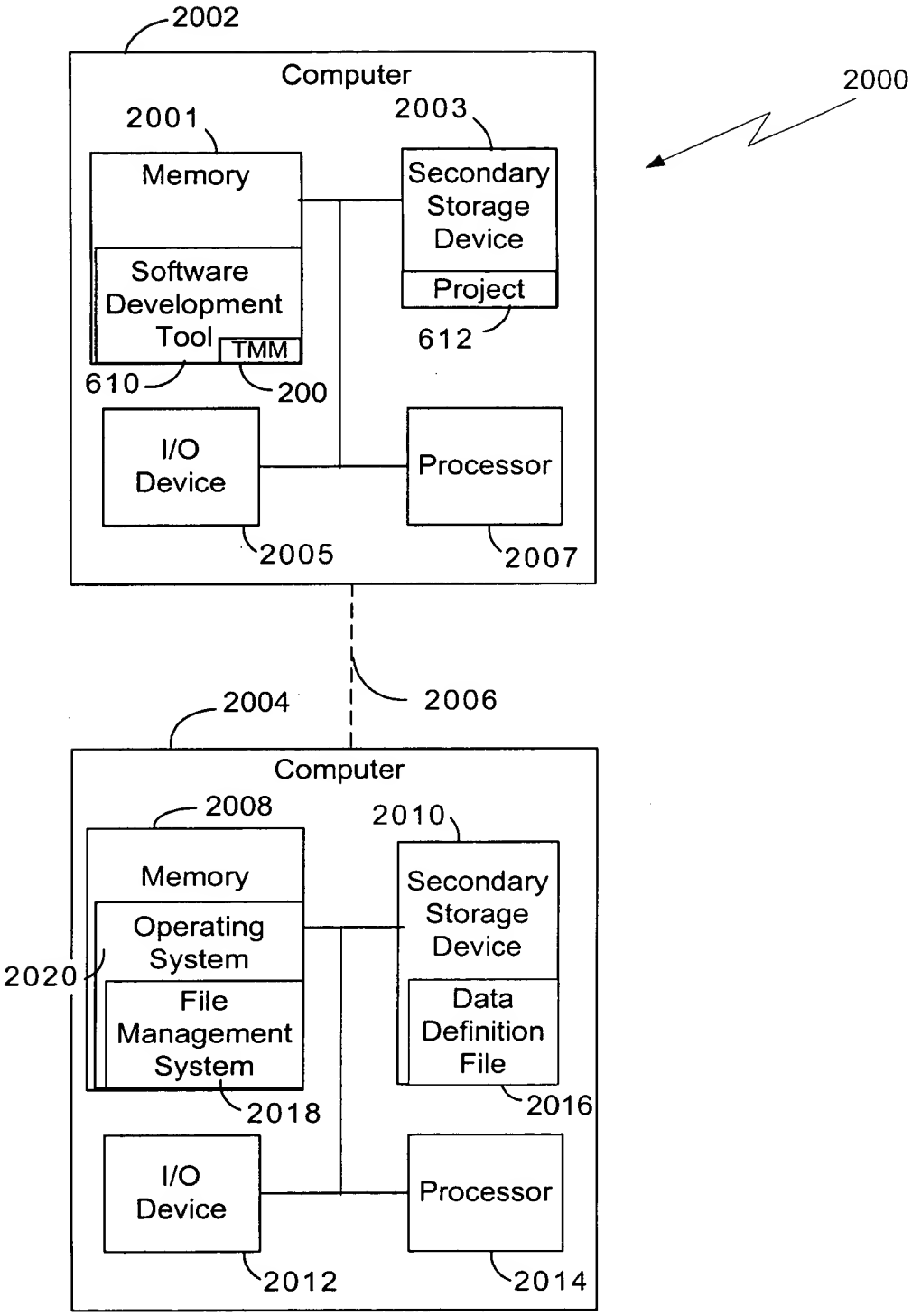

Together 4 -- untitled1
File Edit Object Search View Select Options Tools Help
untitled1
package1
<default>
untitled
untitled1
Node2
Component1
Object1
Node
Component2
Interface1
1900
Insert
Ln: 1
Col: 1

FIG. 19

FIG. 20


2002
Computer
2000
2001
2003
Memory
Secondary Storage Device
Software Development Tool
TMM
Project
612
610
200
I/O Device
Processor
2005
2007
2006
2004
Computer
2008
2010
Memory
Secondary Storage Device
Operating System
2020
File Management System
Data Definition File
2018
2016
I/O Device
Processor
2012
2014

Docket No. 4120.01

FIG. 21A

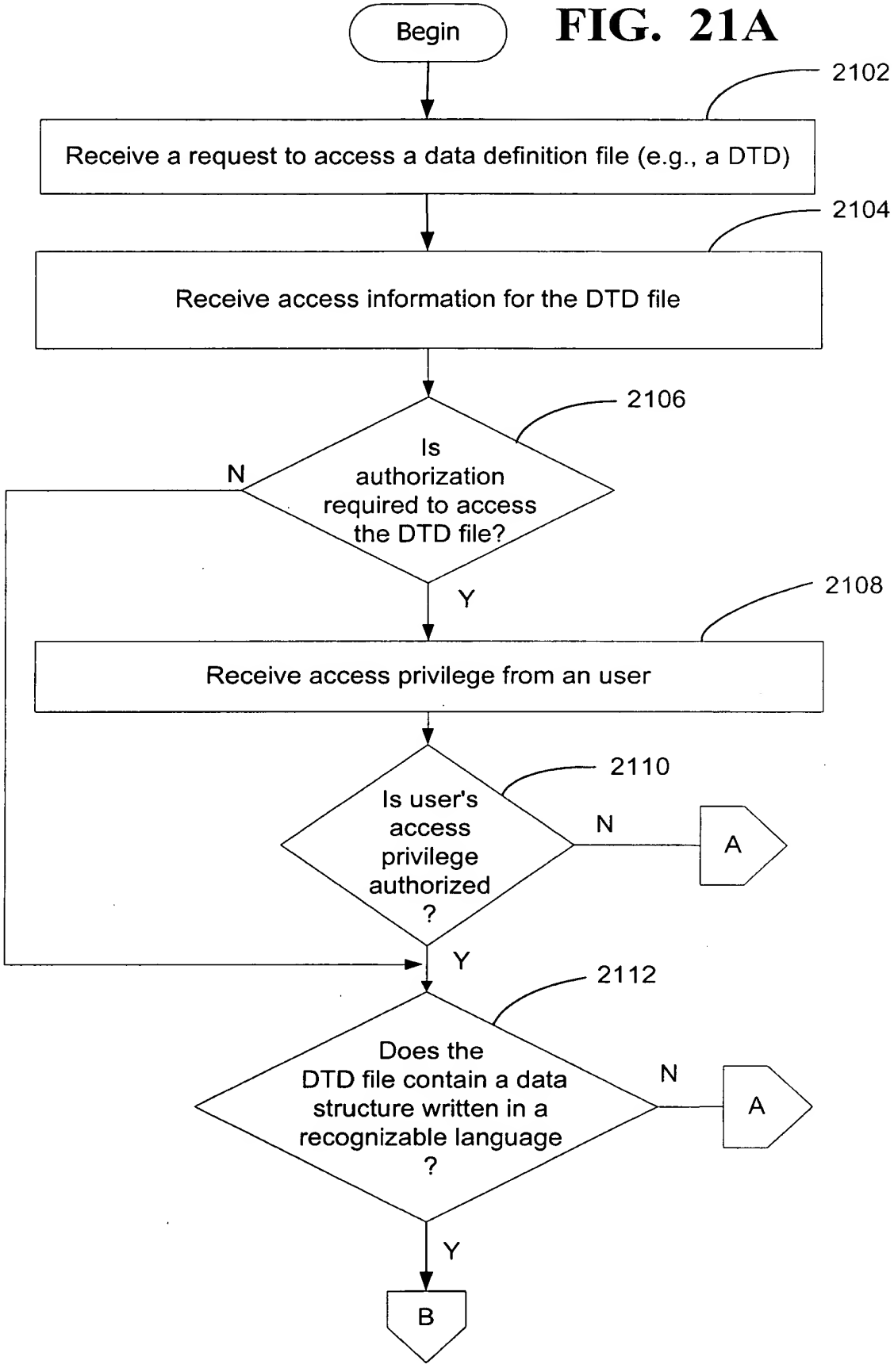


FIG. 21B

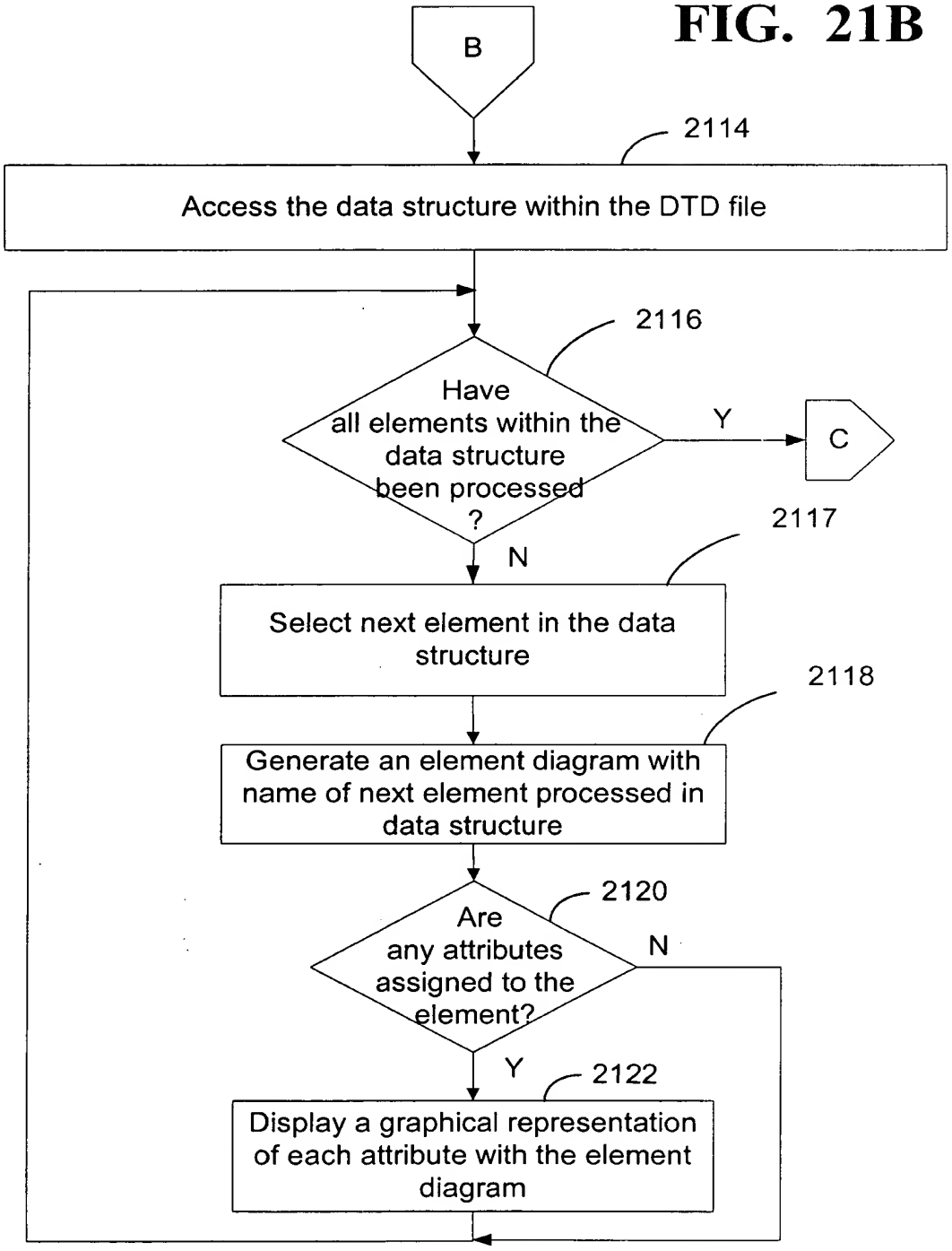

B
2114
Access the data structure within the DTD file
2116
Have all elements within the data structure been processed ?
Y
C
N
2117
Select next element in the data structure
2118
Generate an element diagram with name of next element processed in data structure
2120
Are any attributes assigned to the element?
N
Y
2122
Display a graphical representation of each attribute with the element diagram

FIG. 21C

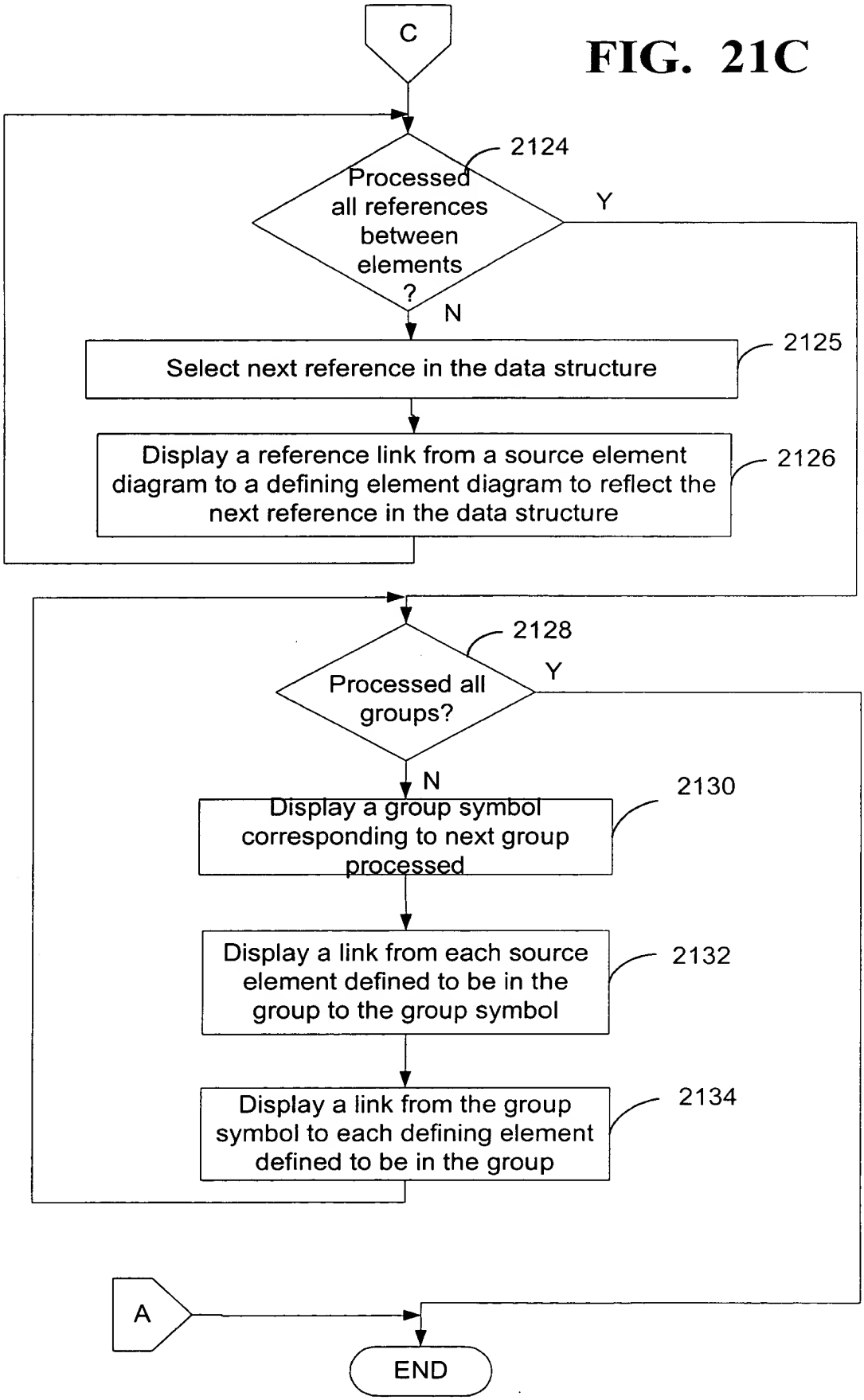
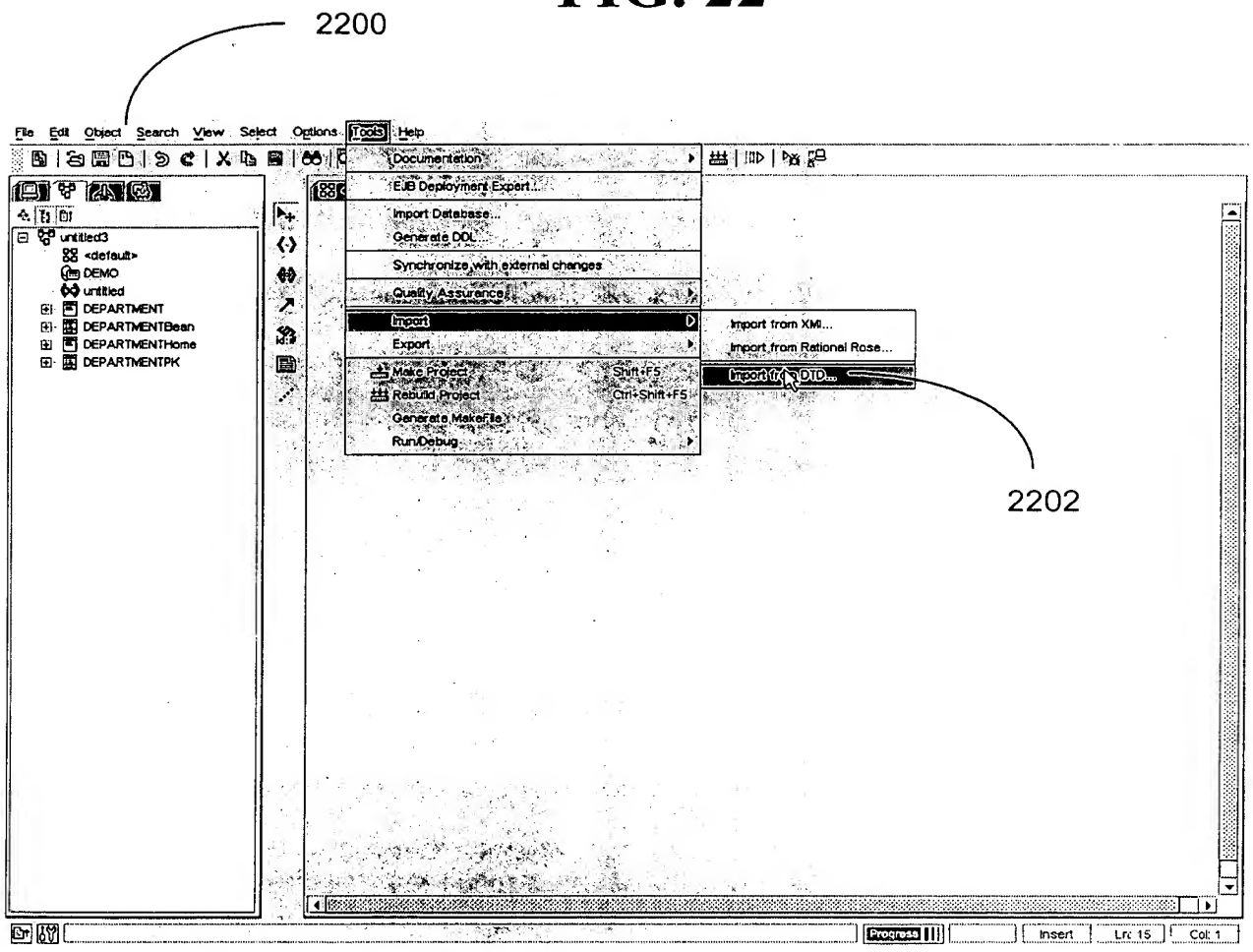

C
2124
Processed all references between elements ?
Y
N
2125
Select next reference in the data structure
Display a reference link from a source element diagram to a defining element diagram to reflect the next reference in the data structure
2126
2128
Processed all groups?
Y
N
2130
Display a group symbol corresponding to next group processed
Display a link from each source element defined to be in the group to the group symbol
2132
Display a link from the group symbol to each defining element defined to be in the group
2134
A
END

FIG. 22



Docket No. 9160-4801

FIG. 23

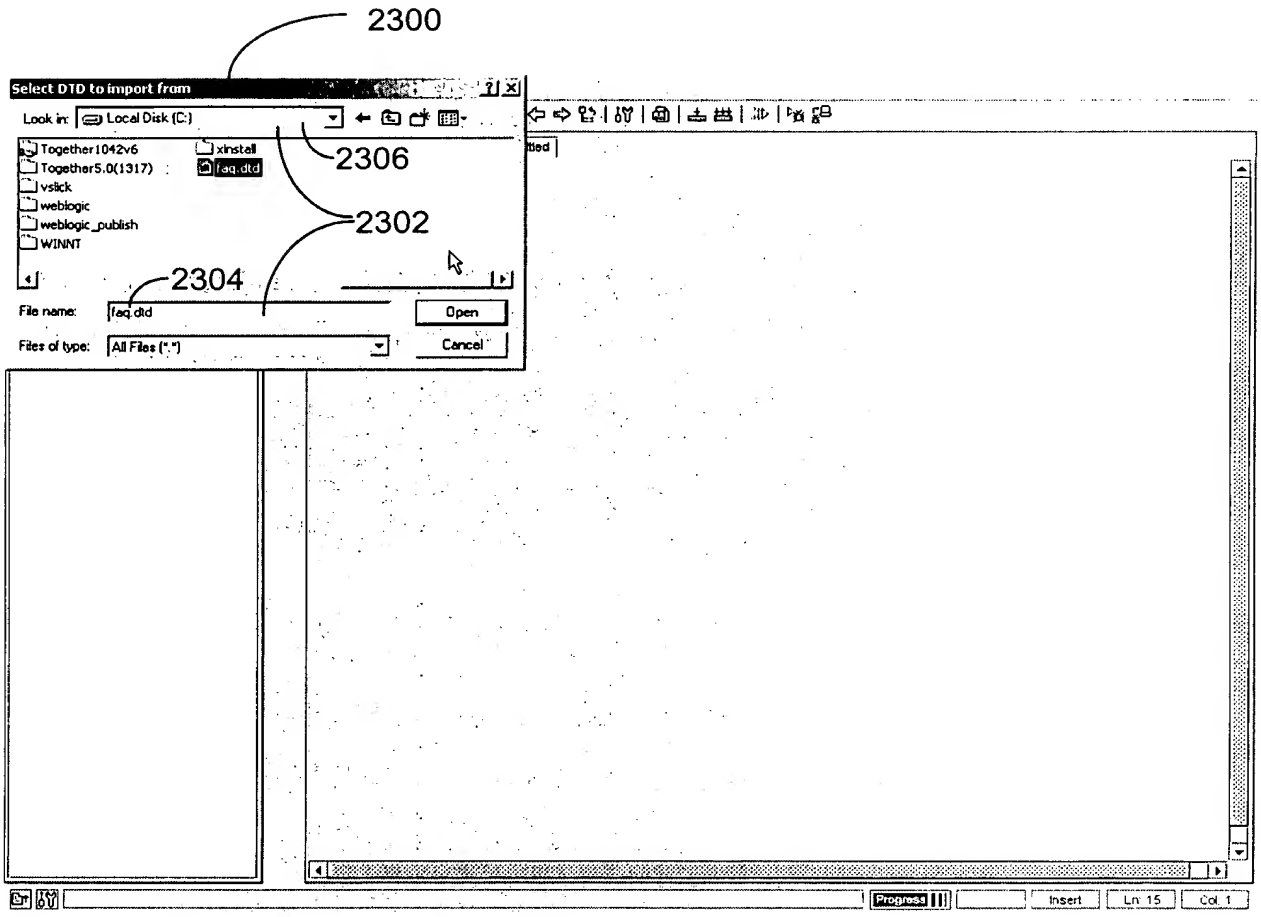

2300
Select DTD to import from
Look in:
Local Disk (C:)
Together1042v6
Together5.0(1317)
vslick
weblogic
weblogic_publish
WINNT
xinstall
faq.dtd
2306
2302
2304
File name:
faq.dtd
Open
Files of type:
All Files (*.*)
Cancel
Progress
Insert
Ln 15
Col 1

FIG. 24

```
<?xml version="1.0" encoding="ASCII"?>                                    2402
<!-- Generated by Together -->                                            2403
<!-- Processing instructions -->
<!-- Attribute entities -->
<!-- Reusable attribute is presented as an entity -->
<!ENTITY % comment "comment CDATA #IMPLIED " >
<!ENTITY % job_description "job_description CDATA #IMPLIED " >
<!-- Attribute group entities -->
<!-- Attribute groups are also presented as entity parameters-->
<!ENTITY % name "first_name CDATA 'ivan' last_name CDATA #REQUIRED
second_name CDATA #IMPLIED " >
<!-- Model group entities -->
<!-- Model groups are presented as entity parameters as well -->
<!ENTITY % xmlModelGroup1 "hierarchy? , url* , personal , email* " >      2414
<!-- Elements -->
<!-- This is an element whose content is described in the Model Group 1 -->
<!ELEMENT employee ( %xmlModelGroup1; ) >                                 2404
                   2406
<!-- Here are the sttributes of this element -->
<!ATTLIST employee identifier CDATA #REQUIRED >                           2408
                  2410
<!ELEMENT chief_executive ( %xmlModelGroup1; ) >                          2418
<!ATTLIST chief_executive identifier CDATA #REQUIRED >
<!ELEMENT url EMPTY >
<!ATTLIST url %job_description; >
<!ELEMENT email (#PCDATA) >
<!ATTLIST email address CDATA #IMPLIED %comment; >
<!ELEMENT personal (#PCDATA) >
<!-- Attribute a-dtype describes non-standard types of the other attributes -->
<!ATTLIST personal date_of_birth CDATA #REQUIRED %name; a-dtype
NMTOKENS "date_of_birth date " >
<!ELEMENT hierarchy EMPTY >
                    2416
<!ATTLIST hierarchy subordinates IDREFS #IMPLIED supervisor ID #IMPLIED
%comment; position CDATA #REQUIRED >
<!ELEMENT personnel (employee* , chief_executive? ) >                     2412
<!-- General entities -->
<!ENTITY Entity1 "111">
<!ENTITY Entity2 PUBLIC "e2" "e2" NDATA Notation1 >
<!ENTITY Entity3 PUBLIC "e3" "e3" NDATA Notation2 >
<!-- Notations -->
<!NOTATION Notation1 PUBLIC "n1" "n1" >
<!NOTATION Notation2 PUBLIC "n2" "n2" >
```

Oracle Ex. 1004 - Page 0041

FIG. 25

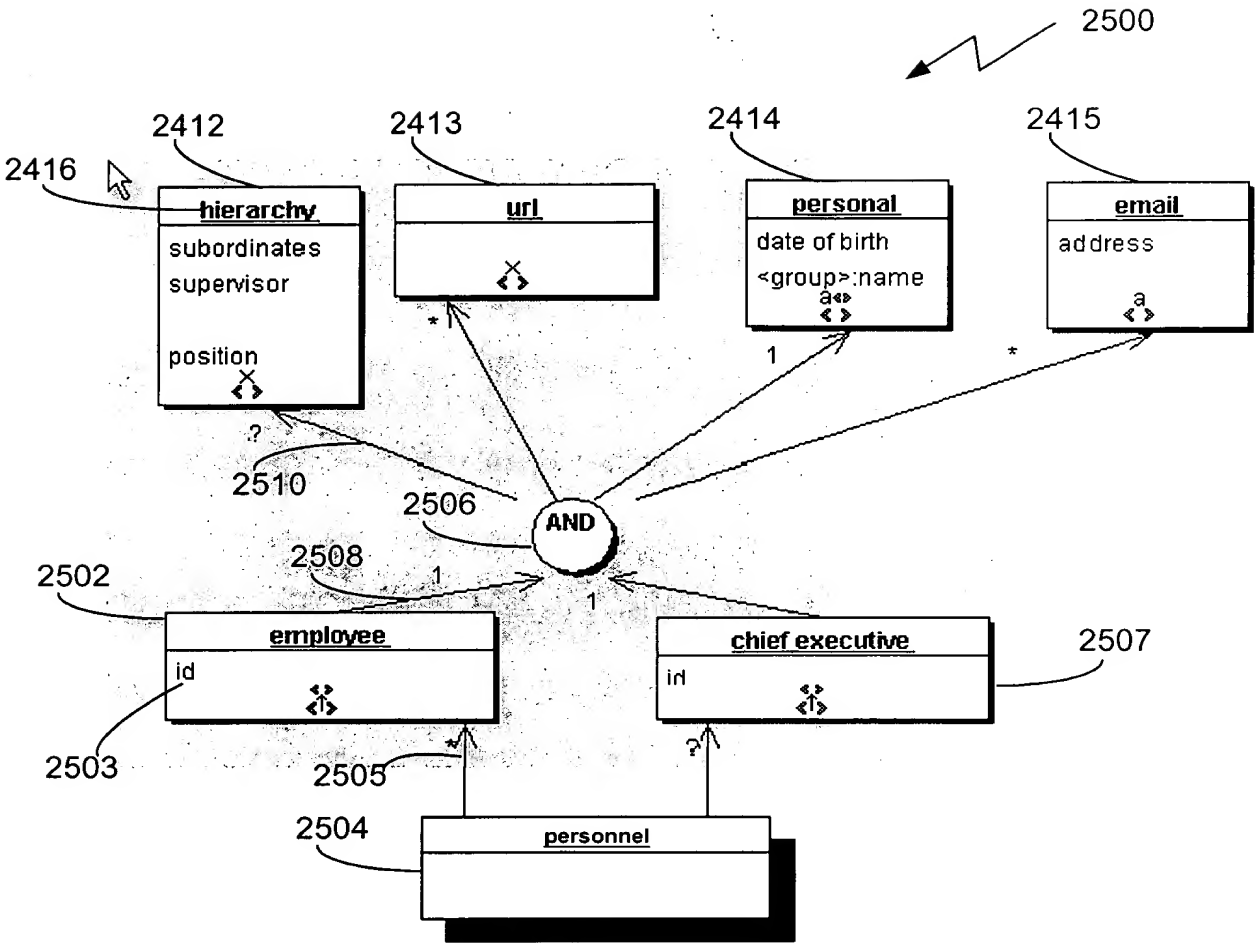

2500
2412
2413
2414
2415
2416
hierarchy
subordinates
supervisor
position
url
personal
date of birth
<group>:name
email
address
2510
2506
AND
2508
2502
employee
id
chief executive
id
2507
2503
2505
2504
personnel

FIG. 26A

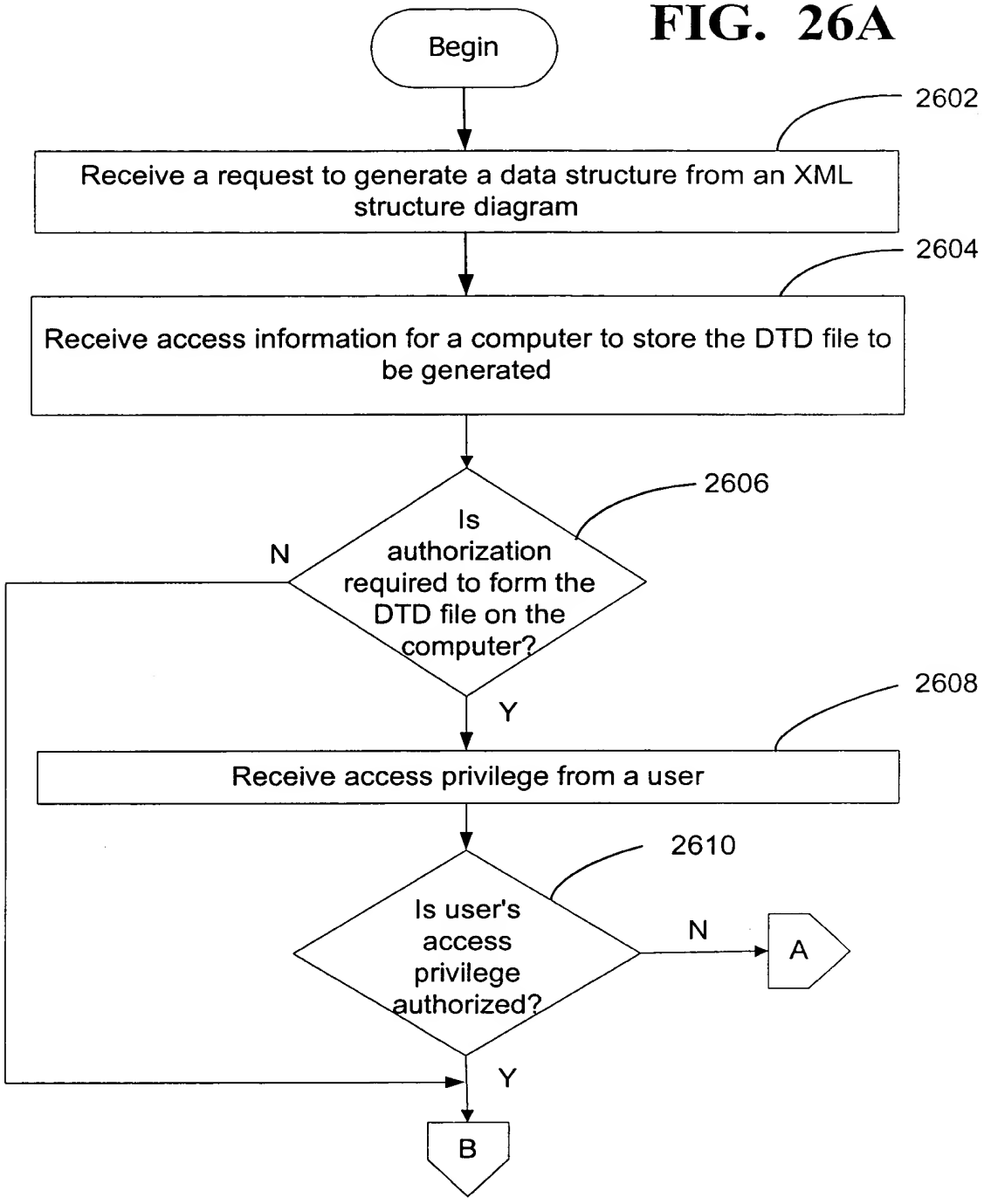
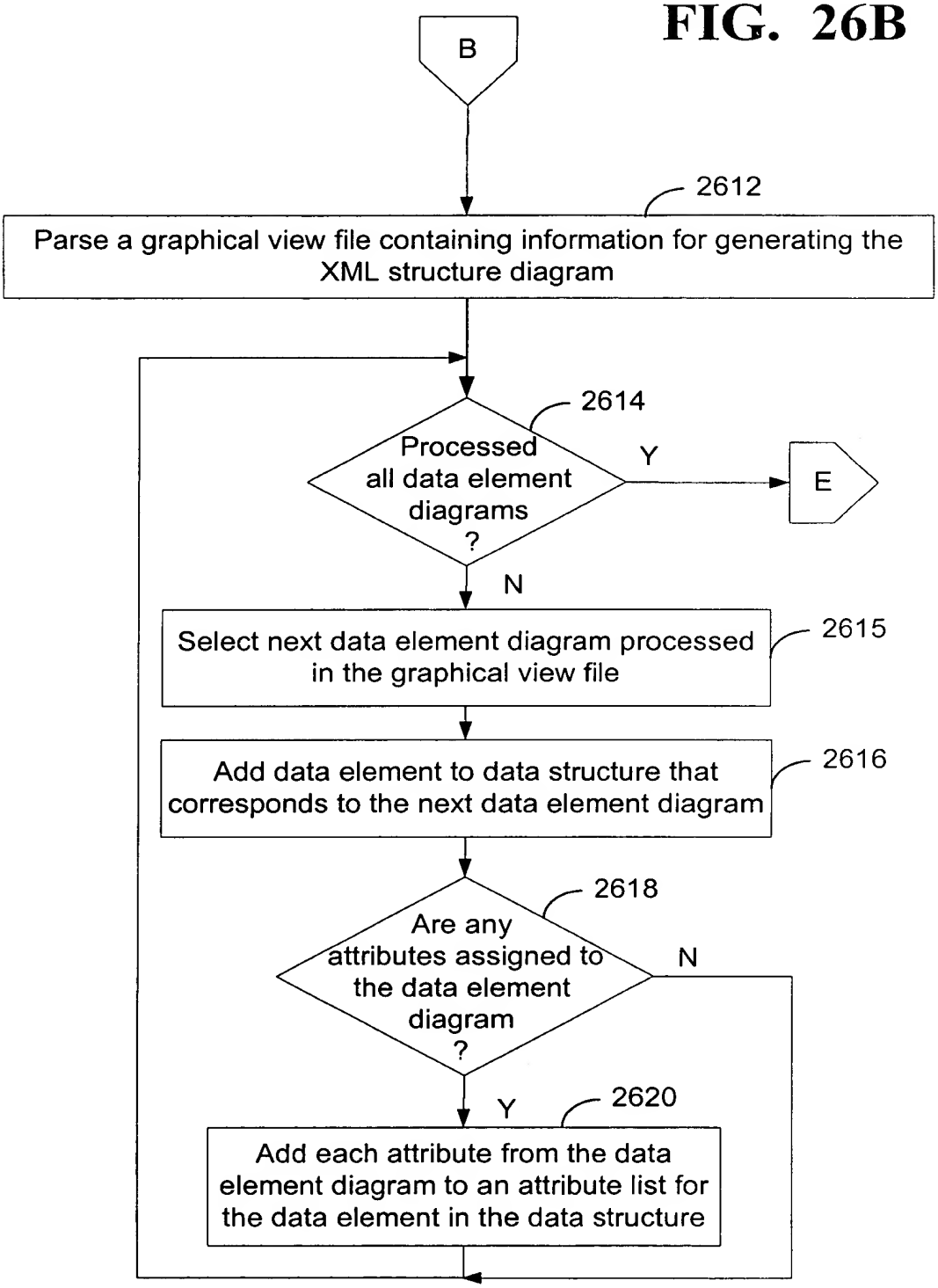

Begin
2602
Receive a request to generate a data structure from an XML structure diagram
2604
Receive access information for a computer to store the DTD file to be generated
2606
Is authorization required to form the DTD file on the computer?
N
Y
2608
Receive access privilege from a user
2610
Is user's access privilege authorized?
N
A
Y
B

FIG. 26B


B
2612
Parse a graphical view file containing information for generating the XML structure diagram
2614
Processed all data element diagrams ?
Y
E
N
Select next data element diagram processed in the graphical view file
2615
Add data element to data structure that corresponds to the next data element diagram
2616
2618
Are any attributes assigned to the data element diagram ?
N
Y
2620
Add each attribute from the data element diagram to an attribute list for the data element in the data structure

9960924 "0520084

FIG. 26C

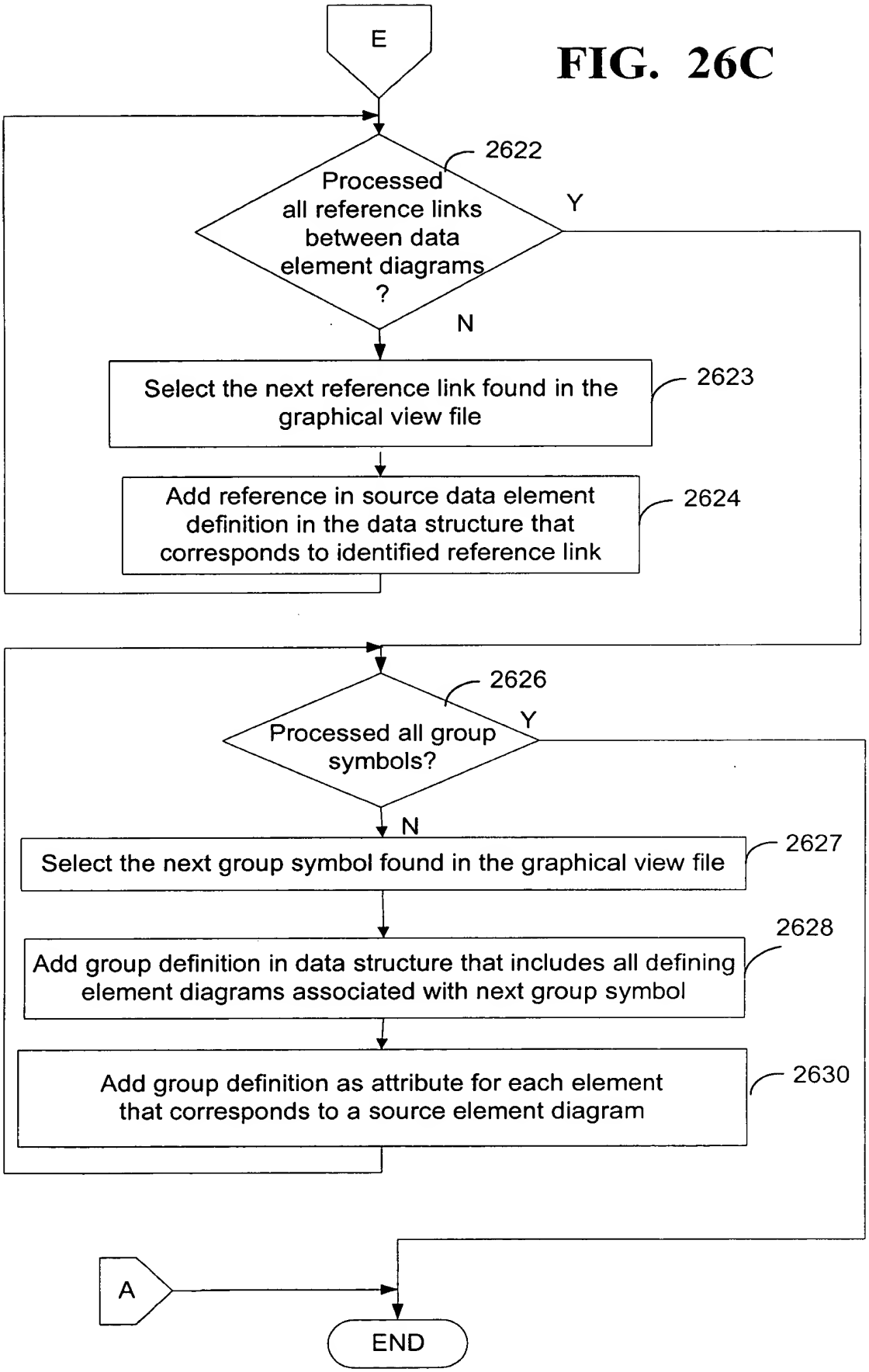


FIG. 27

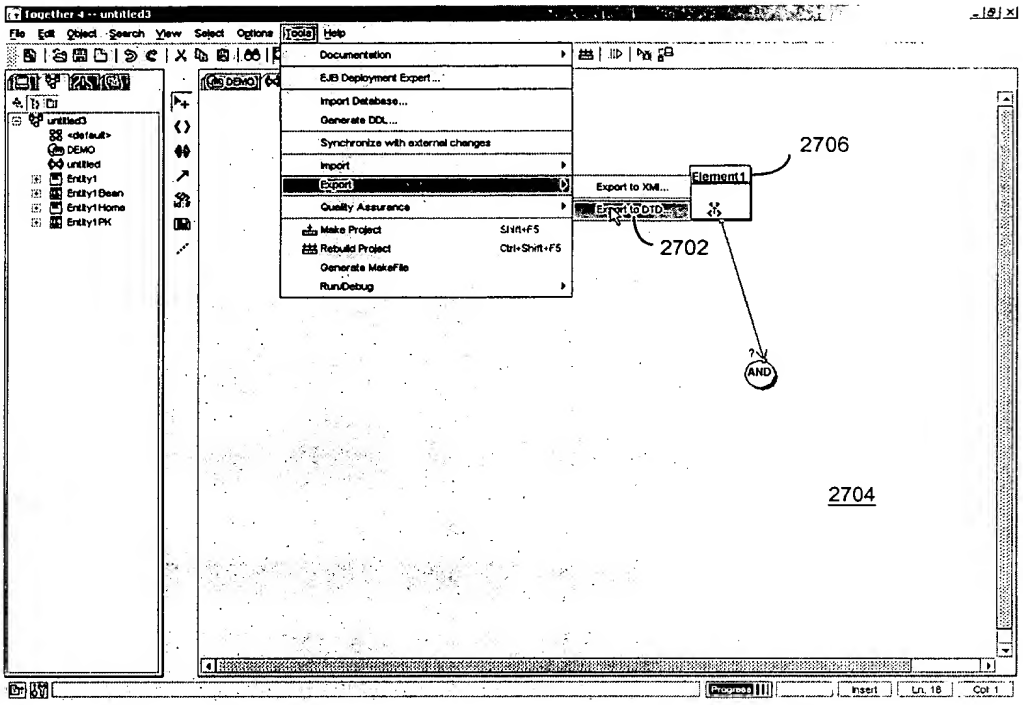
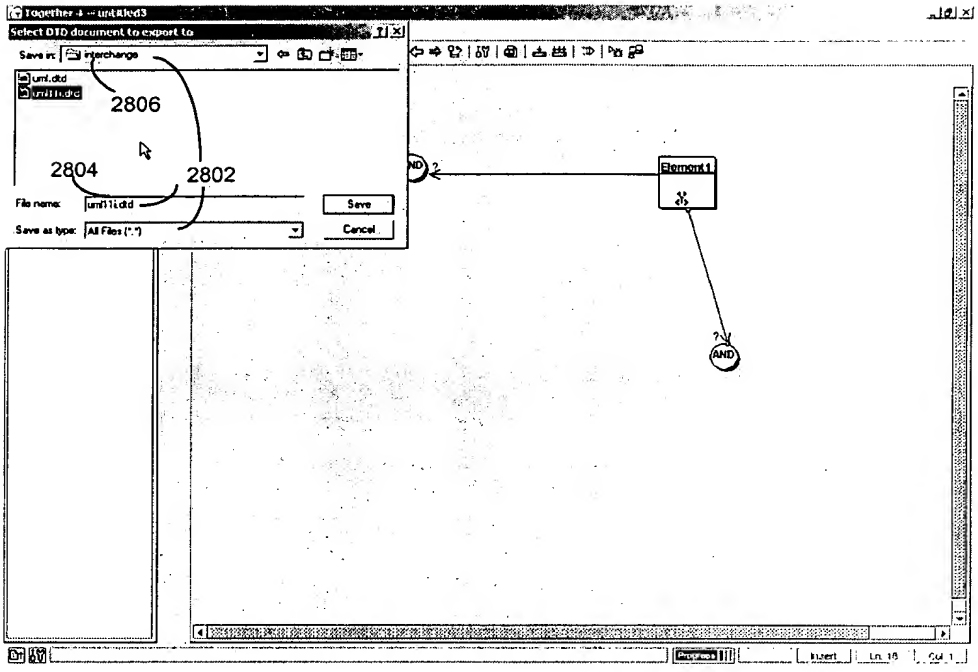

Together 4 -- untitled3
File Edit Object Search View Select Options Tools Help
Documentation
EJB Deployment Expert...
Import Database...
Generate DDL...
Synchronize with external changes
Import
Export
Quality Assurance
Make Project Shift+F5
Rebuild Project Ctrl+Shift+F5
Generate MakeFile
Run/Debug
Export to XMI...
Export to DTD...
Element1
AND
2706
2702
2704

FIG. 28


Select DTD document to export to
Save in:
interchange
uml.dtd
2806
2804
2802
File name:
Save
Cancel
Save as type:
All Files (*.*)
Element1
AND